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MANUAL

for

COUNTY INSTITUTES

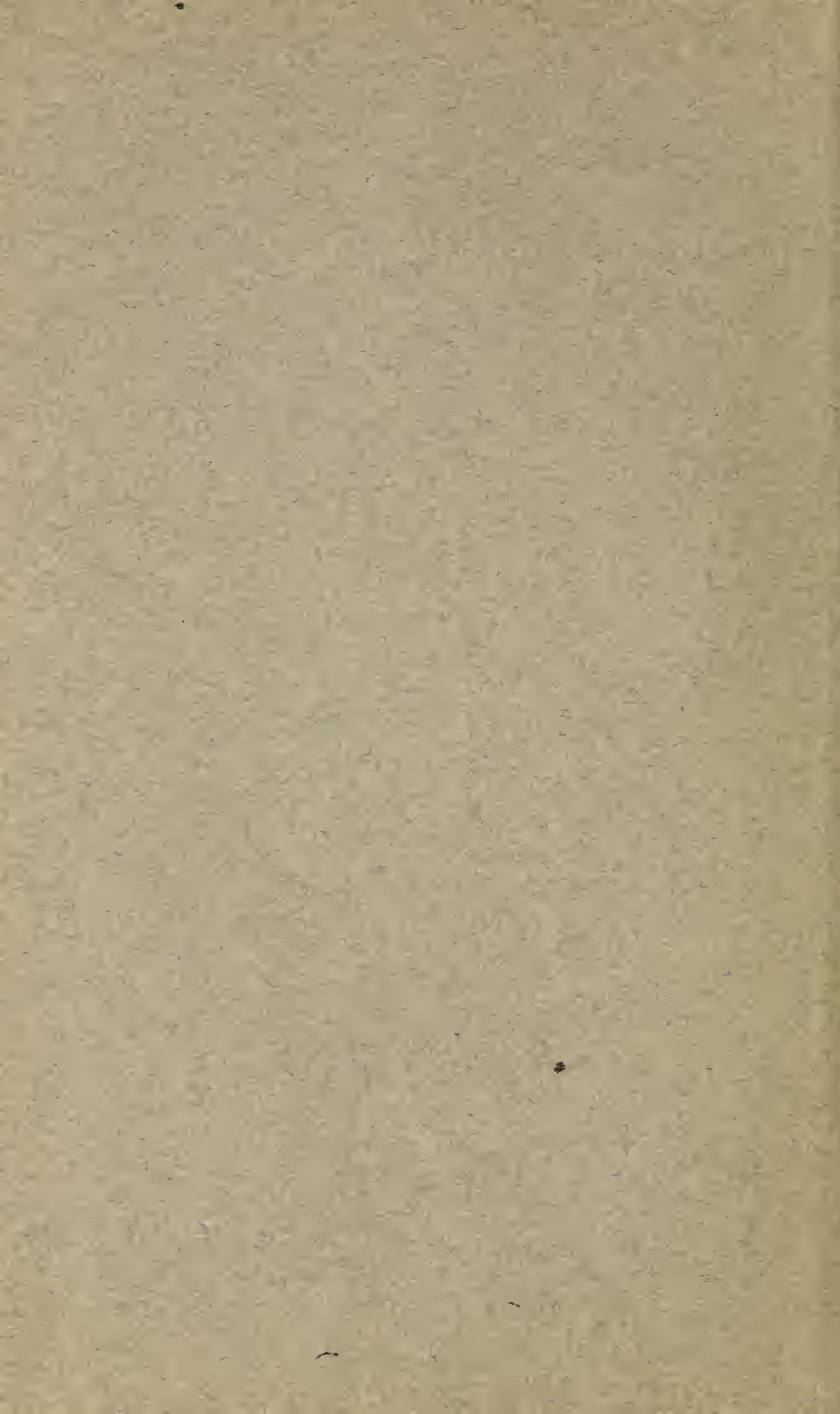
JUNE, 1910

Issued by the

Department of Education

LITTLE ROCK, ARKANSAS

GEO. B. COOK, Superintendent.



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7-10.2.3/1711

A FOREWORD.

The county institute week should mean essentially a time for work on the part of every teacher attending. There can not be that definiteness in work that should characterize the institute unless the work be along efficient, practical, well-arranged plans. The outlines as herewith presented if closely followed will, it is believed, prove a progressive, continuous course of study for the professional training and improvement for the rank and file of the teaching force of the state.

It would be a splendid idea to secure some special primary teacher to present the work in reading. Many of our primary teachers have had special work in plans and methods of teaching reading and could doubtless give the teachers much excellent and needful instruction as to the best and most improved methods of teaching this subject. The proper teaching of this subject concerns the future efficiency of all our schools.

Every teacher should make careful preparation of each day's work and should take full notes of all the work done—thus having at hand, for future study, the work as presented at the institute. Keep the manual. Questions for the regular examinations will be taken from the manuals from time to time.

The thanks and appreciation of this Department are due those who have assisted in preparing the outlines for this publication—the names of those who have thus aided in this work are given in connection with the headings of the different subjects.

The reports of institutes last year were indeed gratifying to this Department. It is earnestly hoped that the work of the institutes this year may encourage the teachers to prepare themselves as fully as possible for their responsible work.

SCHOOL IMPROVEMENT ASSOCIATION.

FOR TOWN, CITY AND RURAL DISTRICTS.

The Department of Education is encouraging the organization of School Improvement Associations in all the school districts of the State.

During the past year associations of this character have been perfected in some two hundred cities, towns and rural districts and the benefits to the schools have been marked in every instance. Community pride and interest is the vital, the all important factor in raising the standard and efficiency of our schools.

Wherever School Improvement Associations have been organized, there has been a wonderful awakening of interest in matters educational. There has been a banding together of the school patrons—men and women—young and old for the *single purpose* of improving the school. Teachers, directors and patrons have been brought together for discussion, for intelligent understanding, co-operation and organization in matters educational. A School Improvement Association in any district stands for progress and uplift in the work of education in that district.

If there is no association in the district where you are teaching, will you not fill out the blank below, detach and hand to your County Examiner or mail to State Superintendent at Little Rock? Literature and full information for organizing an S. I. A. will then be mailed to you. *Do this without fail.*

"I pledge to do all possible for the HEALTH, COMFORT, BEAUTY AND ATTRACTIVENESS of my school and to organize a School Improvement Association in my school community.

Signed.....

Postoffice..... County.....

ARKANSAS TEACHERS' READING CIRCLE.

The following books have recently been adopted as the course of reading for the year 1910. The questions for the regular examinations as far as practicable will be based upon the texts of the Reading Circle.

COURSE OF READING FOR 1910.

PROFESSIONAL.

- | | |
|---|--------|
| 1. Dinsmore's Teaching a District School..... | \$1.00 |
| American Book Co., Cincinnati, O. | |
| 2. Kern's Among Country Schools..... | 1.25 |
| Ginn & Co., Chicago, Ill. | |
| 3. McMurry's How to Study and Teaching How to Study.... | 1.25 |
| Houghton, Mifflin Co., Boston, Mass. | |

CULTURAL.

- | | |
|---|--------|
| 1. Ferguson and Lewis' Elementary Principles of Agriculture | .75 |
| Ferguson Publishing Co., Sherman, Tex. | |
| 2. Allen's Civics and Health..... | \$1.25 |
| Ginn & Co., Chicago, Ill. | |
| 3. Hart's Essentials of United States History | .50 |
| American Book Co., Cincinnati, O. | |

ARKANSAS PUPILS' READING CIRCLE.

Pupils are required to read two books in each grade from the ones given before receiving a diploma. The work should be done under the direction of the teacher.

COURSE OF READING.

Second Grade—

Rhymes and Fables—Songs and Stories.
Robert Louis Stevenson's Reader.
The Tree Dwellers.
The Stories of Peter and Ellen.

Third Grade—

Racketty—Packetty House.
Stories of Long Ago In the Philippines.
Little Me Too.
Grandpa's Little Girls.

Fourth and Fifth Grades—

Little Princess of Tonapah.
Ba-Long-Long, the Igorotte Boy.
Lady Jane.
With Perry on the Lakes.

Sixth and Seventh Grades—

Tales of the Round Table.
True Indian Stories.
Winning His Way to West Point.
The Prairie Schooner.

Advanced Grades—

Giant Sun and His Family.
Primer of Sanitation.
The Young Ice Whalers.
Gray Lady and the Birds.

Note—The books for the Reading Circles may be ordered from W. J. McIlwain, Editor of Arkansas School Journal, Little Rock, Arkansas.

NATIONAL EDUCATION ASSOCIATION.

BOSTON, MASSACHUSETTS, JULY 5-8, 1910.

The Forty-Eighth Annual Meeting of the National Education Association will convene this year at Boston, Massachusetts, July 5-8. This is a great educational meeting and any teacher who can possibly attend should arrange to do so. The meeting will be *immensely* helpful to you—socially, intellectually and professionally. Boston is a great educational and convention city. A visit to this city *alone* will be worth the cost of the entire trip. Add to the attractions and pleasures of a trip to New England, with its offer of a number of delightful side trips to places of historic interest, the great educational profit and good to be derived from attending the greatest Educational Convention. *Railroad rates will be very low.* For programs, detailed information as to rates, routes, etc., address: State Superintendent Geo. B. Cook, State Manager N. E. A.

EXPLANATORY.

That the teachers may fully understand the law requiring Elementary Agriculture and Horticulture to be taught in the public schools, the entire Act is published in this manual; also that portion of the School Law which requires an approved examination on all subjects taught in the public schools.

It is the aim of the State Superintendent to make this law effective and at the same time to be as considerate as possible of the teachers, county examiners and others directly effected by this Act.

This subject will be included, beginning with the June examination 1910, in all examinations for teachers' licenses of all grades.

The questions on Elementary Agriculture and Horticulture for the next year will be selected from the outline in this Manual, which is made from Ferguson and Lewis Elementary Principles of Agriculture.

The State Superintendent suggests that arrangements be made between the County Examiner and those teachers who are not required to take the regular June examination to have a special examination on this new subject while all are assembled at the June Institute.

No certificate of any grade should be renewed until the person holding the license to be endorsed for renewal has passed a satisfactory examination on the subject of Elementary Agriculture and Horticulture.

ACT 315.

AN ACT to require the teaching of Elementary Agriculture and Horticulture in the public schools of this State.

SECTION 1. That school directors of the various school districts of the State of Arkansas, are hereby directed

and required to require all persons teaching in the public schools of this State to teach elementary agriculture and horticulture in their Schools.

SECTION 2. That all authorities empowered by statute to adopt text books for use in their public schools of this State are hereby directed and required to select and adopt some suitable elementary text book on the subject of agriculture and horticulture to be used in the public schools of their respective counties or districts.

SECTION 3. That it shall be made the duty of the county examiner of each and every county in the State to see that every public school district in the various counties of this State have in their possession the text book on elementary agriculture and horticulture adopted for use in their respective counties or districts.

SECTION 4. That it shall be the duty of each and every county examiner to see that the provisions of this Act be enforced.

SECTION 5. That any county examiner, school director or other officer having authority to enforce the provisions of this Act, shall neglect or refuse to enforce the same, shall forfeit to the district so neglected or refused, the sum of twenty-five dollars, said sum to be added to the school fund of said district, which may be recovered by action brought against him, at the instance of any elector in said neglected or refused district.

SECTION 6. All laws and parts of laws in conflict herewith be and they are hereby repealed.

SECTION 7. That this law take effect ten months after its passage.

Approved May 31, 1909.

Note:—"Each teacher shall be authorized to teach only those branches upon which he has passed an approved examination, and which he has been licensed to teach." (Extract from School Law, part of Section 7577, Kirby's Digest).

PROGRAM

MORNING.

Page.	Subject.	Time.
	Opening Exercises	8:30 to 8:45
10.	Theory and Practice	8:45 to 9:15
27.	Arithmetic	9:15 to 9:45
39.	Elementary Agriculture.....	9:45 to 10:15

Recess.

50.	Penmanship	10:30 to 11:00
53.	Grammar	11:00 to 11:30
66.	Reading	11:30 to 12:00

Intermission.

AFTERNOON.

84.	Arkansas History	1:00 to 1:30
88.	United States History.....	1:30 to 2:00
99.	Orthography.....	2:00 to 2:30

Recess.

110.	Physiology	2:45 to 3:15
114.	Geography	3:15 to 3:45
120.	Algebra.....	3:45 to 4:15
132.	Civil Government	4:15 to Close

THEORY and PRACTICE

Questions on Dinsmore's Teaching a District School

BY THE AUTHOR.

FIRST DAY.

DR. FROST'S INTRODUCTION.

1. Why does the country school teacher figure as a hero in American history?
2. What is ambition in a proper sense?
3. Where are its birthplaces?
4. Why is the country school teacher so necessary in many communities?
5. How do the difficulties of the country school teacher compare with those of the city teacher?
6. How should every teacher act toward his work?

AUTHOR'S EXPLANATORY NOTE.

1. Why is the country school teacher "needy" in respect to information and guidance?
2. What advantages common to city teachers are lacking to country teachers?

QUESTIONS ON CHAPTER

1. Why is it a serious thing to choose the profession of teaching?

2. The points upon which the five self-imposed questions are built are: Character, motive, aptness to teach, love for children, and teaching not a "soft snap." What questions are asked upon each of these points?

3. What is the great mistake of most young people who enter the profession of teaching?

4. How do the importance and responsibility of the teacher's work compare with that of the physician and lawyer?

5. What education should one have who is to teach grammar grades? Academy or High School? College?

6. What is meant by the "reading habit?" When should it be formed?

7. How would country teachers compare in general knowledge with traveling men?

8. What are the legal requirements for a country school teacher in your State?

9. What are the arguments for and against county examinations?

10. What are the advantages of a personal application?

11. What care should one take in his personal appearance?

12. What are the essentials in making application by letter?

13. What are some things an applicant should avoid?

14. In inspecting the school house with a view to improvements, what two lists should be made?

15. How shall the proper official be persuaded to furnish necessary improvements and equipment?

16. Explain fully all that may be done before opening day.

17. Explain how a morning program for the first day of school may be prepared.

18. How should the school be organized into classes?

19. How may classes be quickly set to work?
20. How would you start the chart class to learning to read?
21. How hear the first reader class? Other classes?
22. How close the school?
23. What are some points that should mark a good beginning?

CHAPTER II.

1. For what is the school created? For what not created?
2. What are the principal duties of parents?
3. Why is the matter of a book, pencil, or a slate important to a child?
4. What are some of the rights of parents? Name five.
5. How may a teacher show his wisdom and tact in dealing with complaining parents?
6. Do the wisest men need counsel? Suggest examples.
7. Who are the legal counselors of the teacher?
8. What ways has the County Superintendent of judging the efficiency of his teachers?
9. How should the school be prepared for the County Superintendent's visit?
10. What should take place when he arrives?
11. What is the importance of correct classification? Why is tact necessary on the part of the teacher?
12. What is the ordinary basis for classifying?
13. Is readiness in reading a sure criterion? What does a poor reader often need? How shall he get it?
14. Why is it difficult to keep the arithmetic classes evenly graded? Suggest ways.
15. Why is going back a discouraging process?

16. Illustrate the general wisdom of rules and regulations.
17. In what particulars should a school go like "clock work?"
18. What is meant by "cutting and fitting" in formulating rules?
19. How are "precedents" established? What is their value?
20. Explain *prohibitive* and *directive* rules. Which is better? Why?
21. What rules should the teacher make for himself?
22. Name the topics for each morning in the "specially planned" exercises.
23. How may memory gems be secured and taught? Of what sort should they be?
24. What should be the nature of "current events"? How may they be obtained?
25. Give detailed instruction for the "story for reproduction" exercises.
26. Suggest a list of names for biographical sketches.
27. Is the country school a good place for nature-study work? Why?
28. Suggest material and ways of carrying on this work.
29. What are the chief points of excellence in the daily program outlined on pages 44 and 45?
30. Would you prefer that the Sixth Grade should recite arithmetic in the afternoon rather than the first thing in the morning? Why?
31. After the Fourth Grade recites its reading lesson, it has 55 minutes for studying physiology and 15 for reciting it. Is this well proportioned?
32. Does the Third Grade have too much time for the study of arithmetic after its reading lesson?
33. Can you suggest a better balancing of study periods?

SECOND DAY.

CHAPTER III

1. Why is assigning lessons so important a matter?
2. What must the teacher know in order to assign lessons rightly?
3. Give an example of the way in which a reading lesson should be assigned. A geography lesson.
4. An arithmetic lesson for an advanced class. For a beginning class.
5. Show how the abstract truth of one of these small examples may be made concrete.
6. Suggest materials for busy work and ways of using these materials.
7. Describe in full the illustration of the group of children gathering flowers, and their subsequent experience with their teacher.
8. How does this apply to the "Lesson Period"?
9. Under the topic "Important Features of the Lesson Period", is a list of ten things the Lesson Period should stand for. Name and discuss them.
10. Give examples where the main object of the lesson would be *skill*; where the main object would be the acquirement of knowledge; of general culture
11. Give the origin of the allusions, "He was being used as a cat's paw," etc.
12. What is said of the value and art of illustrations?
13. How may important matters be emphasized?
14. Point out the illustrations on page 58.
15. What is the effect of sharp questioning?
16. Name and illustrate the four classes of questions mentioned on page 59.
17. Give several reasons for daily or frequent reviews.

18. Show the advantages of written reviews.
19. Why is attention so necessary to learning?
20. What is the key to attention?
21. When interest is waning, what is to be done?
22. In what two ways may a lack of interest be accounted for?
23. What is meant by knowledge being usable?
24. How may original lessons be prepared, and what is their value?
25. Where shall we find our materials for character training?
26. What should be taught in the way of politeness?
27. Why is the teacher's example so important in this work?
28. What is meant by the terms "order" and "disorder" in the school-room?
29. What are the commonest sources of disorder?
30. How should whispering be dealt with?
31. What are the evils of running to the teacher to have words pronounced?
32. How may the practice be cured?
33. Has play an educational value?
34. How is it recognized in colleges and universities?
35. What would be the probable effect of depriving children of play?
36. Give three rules for regulating the intermissions.
37. What should be the teacher's part in games?
38. Show how luncheon time may be made socially valuable.

CHAPTER IV

1. What is the status of attendance in many district schools?

2. State three common causes of chronic absence.
3. What is most effective in inducing a large attendance?
4. How can parents be shown their obligation to send their children to school?
5. Describe ways of winning parents and children to a proper interest in school.
6. What are the three main causes of tardiness?
7. How should laziness be treated?
8. Suggest arguments that might be presented to thoughtless parents.
9. How do some parents show bad judgment in keeping children out of school?
10. How may the teacher treat the first tardiness that occurs?
11. Suggest treatment for children who are unavoidably detained at home.
12. What attention should be paid toward keeping house and grounds in proper condition?
13. What is the moral effect of neglecting repairs when needed?
14. What care should be taken in regard to sanitation?
15. What relation exists between good order and good humor?
16. Suggest exercises for producing harmony of feeling.
17. What should the teacher do in case of bitter factional strife in the neighborhood?
18. To what extent should the teacher exercise the office of a physician?
19. How guard against contagious diseases?
20. What instruction should be given concerning typhoid fever?
21. State the first rule of health. What does it mean?
22. What does real cleanliness mean?

23. How are cellars often a menace to health?
24. What should children be taught in regard to personal cleanliness?
25. State the second rule of health. What can the country teacher do to promote the observance of this rule?
26. What are the four principal kinds of food?
27. Give outline for discussion of each of these kinds.
28. What is the third rule of health?
29. What should be the standard of purity of air in school house, bedroom, church and everywhere?
30. How may the air of a room be tested?
31. How is the spread of consumption often brought about?
32. What is the fourth rule of health?
33. Why should there be calisthenics in country schools?
34. Suggest exercises for arms, lower limbs, body and head.
35. Give directions for a breathing exercise.
36. What is the common attitude toward rhetorical exercises in country schools?
37. What is the effect of beginning wrong?
38. How may small pupils be taught to write compositions?

CHAPTER V.

1. Why does the district school teacher more than others need spurs for his own use?
2. What is spur No. 1, and how should it be applied?
3. What is spur No. 2? How should it be made effective?
4. Show how spurs Nos. 3, 4, and 5 may be used.
5. What is meant by keeping a brave front?
6. Why should a teacher keep his woes to himself?

7. What should be his attitude toward discouraged pupils?
8. What can be done for those who are lacking in some one branch?
9. What treatment do the timid ones need?
10. Why should the teacher appoint himself a lookout committee?
11. What danger lies in getting into ruts?
12. What special reason is there for trying new methods?
13. When new devices are offered the teacher, what is the safe rule?
14. Why is daily study an absolute necessity?
15. How may one get the most out of Teachers' Associations?
16. Give a list of reserve forces, and tell how to use them?
17. How may desirable visitors be secured?

CHAPTER VI.

1. What is meant by "love"? How is it manifested?
2. How may love for unlovable children be acquired?
3. Relate the incident of the "Incorrigible Boy".
4. How should punishment follow as the natural result of wrongdoing? Give examples.
5. What special applications of love will the little ones need?
6. What demands have the second and third grades?
7. In what respect should all be treated alike?
8. How should misdeeds be regarded?
9. How do backward students become discouraged?
10. Relate the "Helpful Story".
11. What may be done to help those who are very poor?

12. What attention should the bright and attractive children receive?

13. What is the teacher's proper attitude toward the most advanced pupils?

14. Give probable reasons for "badness" in certain pupils.

15. In whom does the difference between the bad and the good frequently lie? Show how.

16. Give examples of dull children who have afterwards become noted for their mental powers.

17. How may such examples be accounted for?

CHAPTER VII.

1. What criticism is commonly made upon the work of the school?

2. What grounds exist for such criticism?

3. How may the reading habit be acquired?

4. What kind of books should compose the school library, and how may they be chosen?

5. How may the teacher add to the interest of the books read by the pupils?

6. How may the children be encouraged to own books?

7. How may home reading be encouraged?

8. Why should the world judge of one's education by his use of English rather than by other branches of study?

9. How may first reader pupils be started on the road to correct English?

10. Why is it well to take pains to instruct children at an early age in the correct pronunciation and meaning of words?

11. Show how the study of geography should begin.

12. Show how distance is measured or estimated by certain units of measurement.

13. How teach children a ready understanding of these units?

14. What should be taught next after direction and distance?
15. How does the school yard represent the whole earth?
16. How shall children be led to understand the world as a whole?
17. At what time should a text-book be placed in the hands of the children, and how should they be prepared for it?
18. How make the study of geography practical for the more advanced pupils?
19. Illustrate the meaning of "raw material" and "finished product."
20. Why should history be written?
21. How was it taught when it was not written?
22. Why are we not ready to discard teaching by word of mouth?
23. How may history be introduced to young pupils?
24. Relate the story of "A Very Active Boy", of "Christopher as a Sailor", etc.
25. Describe time and use of a primary history.
26. How may history be applied to character-building?
27. What good point is made concerning our military heroes?
28. Name four results that should accrue from the study of history.

FOURTH DAY.

CHAPTER VIII.

1. Give some answers to the question, "What is the matter with arithmetic"?
2. Which should predominate, the practical or the cultural, in the teaching of arithmetic?

3. Mention some of the practical problems of life that can not be solved by arithmetic. Are there many such?
4. What should be the main object in the study of arithmetic?
5. How much time and effort should be devoted to skill in computing and handling numbers?
6. In solving thought problems, what should be the watchword?
7. Illustrate how to lead children from the known to the unknown?
8. What are the hopeful signs in regard to the teaching of arithmetic?
9. How is man related to all living things?
10. How will the study of one subject, as for example food, lead us to the study of other subjects?
11. Why is comparative physiology an interesting study?
12. Does nature furnish plenty of material for such study?
13. State the advantages of studying nature at first hand.
14. How may children be led to see the evil results of bad habits?
15. Show proofs of the injurious effects of tobacco upon students and young men.
16. How may the children's minds be fortified against the use of intoxicating drinks?
17. What is the attitude of employers toward men who drink?
18. How does it happen that so many schools turn out "bad" spellers?
19. Show an improvement that might be made over the old formula, "Take the next lesson".
20. Why can not some people learn to spell easily?

21. Suggest a helpful course for such students.
22. What is the importance of knowing the meaning as well as the spelling of words?
23. How do we finally remember how a word is spelled?
24. Explain how word cards may be useful in teaching the ready recognition of words.
25. What are the essential qualifications of a penman?
26. What is the secret of success in learning to write?
27. At what age or grade should pupils be supplied with pen and ink?

CHAPTER IX.

1. How does farm life offer an interesting field to an educated man?
2. Relate the story of the chinch bugs in Kansas?
3. What special subjects are taught in agricultural colleges?
4. What is the "school garden", and how is it making headway?
5. Why is ignorance of his calling particularly costly to the farmer?
6. How has trade life been honored?
7. Why should one who is preparing to be a carpenter have an education?
8. How are trades learned in these days? How were they in former days?
9. What general education should a carpenter possess?
10. What of blacksmithing?
11. What are the leading professions?
12. What is theology and how is it studied?
13. Why is it especially needful for a minister of the gospel to be well educated?

14. What seal has been set against hasty preparation?
15. Why do so many bright young men choose the profession of law?
16. What is a "criminal lawyer"?
17. What great temptation does he meet?
18. How should a lawyer represent his client?
19. What are some things he should not do?
20. How does the practice of medicine stand among professions?
21. In what should a physician's success lie?
22. Why is teaching used as a stepping-stone by so many young people?
23. What incentive is there for thorough preparation for teaching?
24. What is the standing of other callings mentioned?
25. What is the common fault of young people in regard to occupations?
26. How is the business of a merchant best learned?
27. Explain the various steps and what one should learn in each.
28. Describe how the son of a railroad president won his way.
29. How is an ambition to be a politician a laudable one?
30. What means are there for preparing the politician for his work?
31. What special accomplishments do many schools provide for girls?
32. What profession is fully open to women by general consent?
33. Have they made good in it?
34. What preparation, general and special, should a girl have for teaching?
35. What other occupations are open to young women?
36. What will insure enjoyment in almost any work?
37. What are the great things to be considered in choosing a life work?

FIFTH DAY.

CHAPTER X.

1. What are the five heads under which government is considered?
2. Give the two meanings of the term "order."
3. What points in regard to order should pupils be taught to observe regularly?
4. What is the value of system in work?
5. Why should each pupil have a daily program?
6. How do pupils look upon a well-regulated school?
7. How does nature provide penalties for infractions of her laws?
8. Does the law of natural penalties hold in our moral as well as in our physical being?
9. To what extent are moral wrongs healed when properly treated?
10. Why may corporal punishment sometimes be resorted to?
11. What are the main objections to whipping?
12. Give an illustration of disobedience and how to treat it.
13. How can a child be shown the evil results of lying?
14. What kind of punishments are to be entirely avoided?
15. How do children look upon fairness?
16. What is the objection to reserving sentence?
17. What are the two great essentials of proper punishment?

SCHOOL MANAGEMENT.

18. What is the aim of the public school?
19. How shall the mental development of the pupils be measured?

20. How can the teacher show wisdom in planning details?

21. How in the rendering of decisions?

22. What supervision should the teacher have over the seating of the pupils?

23. How is self-discipline looked upon, and what is its relation to achievement?

24. Is the value of most lessons intrinsic or cultural? Why?

25. What is the test of a teacher?

26. Give examples of teachers whose greatness has been shown in the lives of their pupils.

27. What is a true teacher's greatest cause for rejoicing?

CHAPTER XI.

1. How is the success of an undertaking measured?

2. What is the nature of the school exhibition?

3. What good ends does it serve?

4. Describe the preliminary preparations, committees, etc.

5. What is the nature of the school exposition?

6. Is it right for the public to see the best only? Why?

7. What three elements are necessary to a successful exposition?

8. What subjects can be used to good advantage, and how?

9. How should the display be arranged?

10. What are some of the good results that are likely to flow from an exposition?

11. What work of the school, if it has been properly done, will give parents the greatest pleasure?

12. How may "signs of purpose" be taken as a measure of the school's efficiency?

13. What are some of the things that may be accomplished in even a six months term?

14. How may work be planned so that it will go on to some extent through the vacation?

15. Show how life friendships may be formed in school, and how they may be of great value through life.

ARITHMETIC.

By J. W. Kuykendall, Superintendent of Schools, Fort Smith, Ark.

In the preparation of these lessons in Arithmetic, the effort has been to present a few of the important topics in such simple form as to strip the subject of its mass of artificial complications. No effort has been made to present methods of teaching Arithmetic to pupils.

FIRST DAY.

The Fundamental Principles.

All arithmetical processes are but the combination of numbers, either abstract or concrete, according to well established principles, chief of which are Addition, Subtraction, Multiplication, and Division.

Processes in arithmetic and the solution of problems can be greatly simplified by remembering this important truth. Numbers, both abstract and concrete, are always reducible to one or more *units of measure*.

Addition is the process of finding the sum of two or more numbers having the same unit of measure.

Subtraction is the process of finding how much more one number is than another number having the same unit of measure.

Important.—If two numbers have the same *unit of measure* they may be added or subtracted; if the unit of measure

of one may be reduced to that of the other they may be added or subtracted; if their units of measure are of different orders they can be neither added nor subtracted.

Illustrate these points by problems in abstract numbers, concrete numbers, denominate numbers, addition and subtraction of fractions and decimals.

Multiplication is the process of increasing a number to a certain number of times itself.

The number to be increased is the multiplican, the number of times the multiplier, and the result of the multiplication is the product.

It is evident that the product must have the same unit of measure as the multiplican, and that the multiplier is always an abstract number. The multiplier may be a whole number, a common fraction, a decimal, or a mixed number, but it can never be a concrete number.

Division is the reverse of multiplication, inasmuch as the product of the divisor and the quotient equals the dividend. Just as in multiplication the multiplier is always an abstract number, so in division either the divisor or the quotient must be an abstract number, the other being of the same unit of measure as the dividend. This gives two cases in division.

Division will be treated more fully in the next lesson.

Problems illustrating these principles may be found in any text.

SECOND DAY.

Division, Fractions, Ratio.

These subjects are so closely associated that they may well be studied together. $8 \div 4 = \frac{8}{4} = 8 : 4 = 2$.

Division.

Case I. To find a certain number of equal parts of a number.

In this case the divisor is always an abstract number and the quotient has the same unit of measure as the dividend. Find $\frac{1}{5}$ of 60; $\frac{1}{8}$ of \$600; $234 \text{ bu.} \div 3$.

Case II. To find how many times one number contains another of the same unit of measurement.

In this case the divisor and dividend are of the same unit and the quotient is therefore abstract. $24 \div 6$; $\$250 \div \$50$; $.9 \div .3$; $90 \text{ lbs.} \div 8 \text{ oz.} = 1440 \text{ oz.} \div 8 \text{ oz.}$; $\frac{5}{6} = \frac{1}{2} \div \frac{3}{42} \div \frac{18}{42} = \frac{35}{18}$.

Fractions considered as the division of the numerator by the denominator is but division written in another form. The processes of reduction to higher or lower terms are the multiplication or division of divisor and dividend by the same number, compound fractions are quite similar to case one of division given above, division of fractions is similar to case two of division as illustrated.

Addition and subtraction of fractions are similar to division and subtraction of simple concrete numbers, in that they must first be brought to the same unit of measurement (the common denominator). All this might profitably be expanded into a day's lesson.

Decimals. The processes of addition and subtraction of decimals are similar to like processes with simple numbers, remembering that only like units may be added or subtracted. Multiplication of decimals involves the principles that apply to compound fractions. Division of decimals has the same two cases as division of integers given above.

Case I. Whole numbers divided into whole numbers give whole numbers ($84.6 \div 9 = 9 +$); whole numbers into tenths give tenths ($84.6 \div 9 = 9.4$); etc. 31.225

3)93.675

Case II. Tenths into tenths give whole numbers ($4.56 \div .8 = 5 +$); hundredths into hundredths give whole numbers ($4.56 \div .08 = 57$); etc.

The decimal point is determined as soon as the total whole numbers of the quotient are known.

$$\begin{array}{r} 374.7 \qquad .08 \\ \hline .25) 93.675 \qquad .07) .0056 \end{array}$$

Ratio is the relation of one number to another of the same unit of measure as expressed by the division of the first number by the second. It therefore is case two of division over again.

The relation of division, fractions, and ratio may be better understood by considering the following:

In Division, Dividend $\div$ Divisor = Quotient.

In Fractions, Numerator $\div$ Denominator = Value of fraction.

In Ratio, Antecedent : Consequent = Ratio.

With the substitution of the proper word for divisor, dividend, and quotient, the six principles of division apply to fractions and to ratio.

THIRD DAY.

WRITTEN ANALYSIS.

1. The developing of a logical solution and its reduction to concise written form are among the most important things in teaching arithmetic.

2. The first step in solving any problem is a clear understanding of the things given and the things required and of their relation to each other.

3. Analysis is simply the following up in consecutive order the various steps in the solution. Writing it out is an excellent test of a clear understanding, and is a fine drill as well.

4. These written analyses should be required in all the different divisions of arithmetic, beginning with the simple problems in the fundamental rules.

5. In analysis, the unit of measure forms the basis of the work. The unit varies with each subject. In abstract numbers we have the unit 1; in concrete numbers each thing varies in its unit, as 1 inch, 1 man, etc.; in fractions we have the unit of the fraction 1 or $\frac{1}{4}$, and the fractional unit, $\frac{1}{4}$; and in percentage we have the same dual unity in 100 per cent and 1 per cent.

6. If a pupil can be taught to determine the unit of measure and to refer each step of his solution thereto, unitary analysis will become a familiar and useful method of solving almost any arithmetical problem.

Types of problems.

1. If 5 oranges cost 20 cents, what will 24 oranges cost?
(Unit of measure, 1 orange).

If 5 oranges cost 20 cents, 1 orange will cost $\frac{1}{5}$ of 20 cents, = 4 cents.

24 oranges will cost 24 times 4 cents = 96 cents.

2. If $1\frac{2}{3}$ yards of cloth cost \$1.80, what will $5\frac{1}{4}$ yards cost?

(Unit of measure, $\frac{1}{3}$ yd. and 1 yd.)

If $\frac{2}{3}$ yd. = \$1.80,

$\frac{1}{3}$ yd. = $\frac{1}{2}$ of \$1.80 = \$.36,

$\frac{2}{3}$ or 1 yd. = $3 \times $.36 = $1.08,$

$5\frac{1}{4}$ yd. = $5\frac{1}{4} \times $1.08 = $5.67.$

3. If a man's salary is \$100 a month and his expenses average \$65 a month, how long will it take him to save enough money to buy an 80 acre farm at \$35 per acre?

(Units of measure, price of 1 acre, one month's savings.)

If 1 acre costs \$35. 80 acres cost $80 \times $35 = $2800.$
If he earns \$100 and spends \$65 each month, in one month he saves $$100 - $65 = $35.$ To save \$2800 will require as many months as $$2800 \div $35 = 80.$ Ans. 80 months.

4. Three men are partners in business. A invests \$4000 for 18 mo., B invests \$5500 for 1 yr. 2 mo., C invests \$6500 for 2 yrs. They earn \$3223. Find each man's share.

(Unit of measure, what \$1 earns in 1 mo.)

\$4000 for 18 mo. = $\$4000 \times 18 = \$72000$ inves. for 1 mo.

\$5500 for 14 mo. = $\$5500 \times 14 = \$77000$ " " " "

\$6000 for 24 mo. = $\$6000 \times 24 = \$144000$ " " " "

Total investment = $\$293000$ " " " "

If \$293,000 invested for 1 mo. earn \$ 3223

\$1 invested for 1 mo. earns $\frac{\$3223}{\$293000} = \frac{\$11}{1000}$

\$72000 invested for 1 mo. = $\$72000 \times \frac{\$11}{1000} = \$792$, A's share

\$77000 invested for 1 mo. = $\$77000 \times \frac{\$11}{1000} = \$847$, B's share

\$144000 invested for 1 mo. = $\$144000 \times \frac{\$11}{1000} = \$1584$, C's share

5. A sum of money loaned for two years at 8% interest amounts to \$139.20. How much was loaned?

(Units of measure 1% and 100%.)

100% = the amount loaned.

8% for two years = 16%, interest.

100% + 16% = 116%, amount of prin. and int. .

116% = \$139.20.

1% = $\frac{1}{116}$ of \$139.20 = \$1.20.

100% = 100 times \$1.20 = \$120.00, amount loaned.

FOURTH DAY.

RATIO AND PROPORTION.

Ratio is defined in lesson for first day.

Antecedent : Consequent = Ratio.

Proportion is an equality of *two ratios*.

If four quantities are so related that the ratio of the first to the second equals the ratio of the third to the fourth, the four quantities form a *proportion*.

If four quantities form a proportion, the first and the third are the antecedents of the two equal ratios and the second and the fourth are the consequents. The first and the fourth terms are the *extremes* and the second and the third terms are the *means*.

If four quantities are in proportion, the product of the extremes equals the product of the means.

If $a : b = c : d$, then $ad = bc$.

If $4 : 5 = 12 : 15$, then $4 \times 15 = 5 \times 12$.

If three of the four terms of a proportion are known, the fourth may be found; as $3 : x = 9 : 12$, then $9x = 36$, and $x = 4$, therefore $3 : x = 9 : 12$.

Ratios Containing One Element. If a ratio exists between two simple numbers involving only one element in its unit of measure, it is called a simple ratio, and a proportion formed of two such ratios is called a simple proportion.

Ratios Containing More Than One Element. In most practical problems that may be solved by proportion more than one element enters into the unit of measure of one or both ratios. Such ratios are called compound ratios, and a proportion formed by them is called a compound proportion. The principles involved in stating and solving a compound proportion and a simple proportion are identical.

The Statement of Problems In Proportion. In making the statement of a proportion, that is, arranging the terms in their proper order, two important principles must be observed.

(1) A ratio can only exist between quantities having the same unit of measure.

Therefore, in any problem in proportion, the first and the second terms must have the same unit of measure, and the third and the fourth terms must have the same unit of measure.

(2) In any problem in proportion, the first term has a definite relation to the third term, and the second term has the same relation to the fourth term.

In many types of problems the first term produces or causes the third term, and the second term produces or causes the fourth term.

A proper recognition of this relationship makes the statement of any problem in proportion an easy matter.

APPLICATIONS OF PROPORTION.

Proportion offers a convenient method of solving practical problems that would otherwise require long analyses. It should not be attempted with any problem the solution of which involves principles not already understood.

If the problem must be analyzed before it can be stated, it will be far easier to solve it by analysis. The effort to make the unknown term always be the fourth term is erroneous for this reason.

Types of Problems in proportion are given below:

1st cause : 2nd cause = 1st effect : 2nd effect

1st articles : 2nd articles = 1st cost : 2nd cost

1st working force : 2nd working force = 1st work : 2nd work.

1st principal	} ∴ {	2nd principal	}	= 1st interest : 2nd interest
1st rate		2nd rate		
1st time		2nd time		

Many similar types may be given.

Examples.

1. If 15 acres of land cost \$165, what will 320 acres cost at the same price per acre?

$$1\text{st acres} : 2\text{nd acres} = 1\text{st cost} : 2\text{nd cost}$$

$$15 \text{ acres} : 320 \text{ acres} = \$165 : \$x$$

$$\frac{320 \times 165}{15} = \$3520. \text{ Answer } \$3520.$$

2. If 12 men in 6 days of 8 hours each dig a cellar 40 feet long, 12 feet wide, 6 feet deep, how many men must work 7 days of 9 hours each to dig a basement 140 feet long, 40 feet wide, 9 feet deep?

$$1\text{st working force} : 2\text{nd working force} = 1\text{st work} : 2\text{nd work.}$$

$$\begin{array}{l} 12 \text{ men} \} \{ x \text{ men} \\ 6 \text{ days} \} \{ 7 \text{ days} \\ 8 \text{ hours} \} \{ 9 \text{ hours} \end{array} = 40 \times 12 \times 6 : 140 \times 40 \times 9.$$

$$\left. \frac{12 \times 6 \times 8 \times 140 \times 40 \times 9}{7 \times 9 \times 40 \times 12 \times 6} \right\} = 160. \text{ Answer } 160 \text{ men.}$$

3. If a train run the distance between two stations in 366 minutes at the rate of 20 miles an hour, how long will it take to cover the same distance at 24 miles an hour?

$$\begin{array}{l} 1\text{st time.} \} \{ 2\text{nd time} \\ 1\text{st rate.} \} \{ 2\text{nd rate} \end{array} = 1\text{st distance} : 2\text{nd distance.}$$

$$\begin{array}{l} 366 \text{ min.} \} \{ x \text{ min.} \\ 20 \text{ miles} \} \{ 24 \text{ miles} \end{array} = 1 : 1 \text{ (Since distance is same.)}$$

$$\frac{366 \times 20}{24} = 305. \text{ Answer } 305 \text{ minutes.}$$

FIFTH DAY.

A. TRUE DISCOUNT.

Definitions.

(a) *Discount* is a deduction made from a debt paid before it is due.

(b) The *present worth* is the sum which, put at interest, will amount to the debt when due.

(c) *True Discount* is the difference between the present worth and the amount of the debt.

In true discount the present worth is the basis upon which the interest is calculated, and the debt is the amount of the present worth plus the interest.

In true discount, let 100 per cent equal the present worth, the discount then is the given rate for the time till the debt is due, and the sum of these the amount of debt when due.

If the debt be an interest bearing note the amount of the debt when due will be the face of the note plus the interest.

Example.

What is the true discount upon a note for \$2000, bearing 6 per cent interest, and payable in 2 years, discounted at 8 per cent?

\$2000 at 6 per cent for 2 years = \$240 interest.

\$2000 + \$240 = \$2240, amount of debt.

100 per cent = present worth.

8 per cent for 2 years = 16 per cent = true discount.

100 per cent + 16 per cent = 116 per cent = amount of debt.

116 per cent = \$2240.

1 per cent = $\frac{1}{116}$ of \$2240 = \$19.3103.

100 per cent = $100 \times \$19.3103 = \$1931.03$ present worth.

\$2240 - \$1931.03 = \$308.97, true discount.

B. BANK DISCOUNT.

Definitions.

(a) *Bank Discount* is interest upon the amount of a debt, deducted in advance, and calculated from the day of discount to the day of payment.

(b) *Three Days of Grace* are usually allowed after the date of maturity for payment of the debt.

(c) The *Proceeds of a note* is the amount due less the discount.

In bank discount the amount of the debt is the basis upon which the discount is calculated.

In bank discount let 100 per cent equal the amount of the note, the discount then is the given rate for the time till the note is due, and the difference is the proceeds of the note.

If the note bears interest, the interest must be added and the amount then discounted.

Example.

What are the proceeds of a note for \$1200, due two years from its date, bearing 6 per cent interest, when discounted at 10 per cent at a bank one year before maturity, allowing no days of grace?

$$\text{\$1200 at 6 per cent for 2 years} = \text{\$192 int.}$$

$$\text{\$1200} + \text{\$192} = \text{\$1392, amount of note.}$$

$$100 \text{ per cent} = \text{\$1392, amount of note.}$$

$$10 \text{ per cent of } \text{\$1392} = \text{\$139.20, discount for 1 year.}$$

$$\text{\$1392} - \text{\$139.20} = \text{\$1252.80, proceeds.}$$

Remarks.

1. In true discount 100% is the present worth of the debt; in bank discount 100% is the amount due at maturity.

2. In true discount $100\% + \text{discount} = \text{amount due at maturity}$; in bank discount $100\% - \text{discount} = \text{proceeds}$.

3. In true discount the discount is charged upon the present worth; in bank discount the discount is charged upon the amount due at maturity.

4. True discount is more favorable to the debtor, bank discount to the creditor.

5. Bank discount charges interest, not only upon the proceeds, but also upon the discount.

AGRICULTURE.

By Dr. C. F. Adams, University of Arkansas.

In establishing agriculture in our educational system, the most difficult problem is met in the elementary grades. The problem is occasioned by the fact that agriculture, per se, is a composite, though distinct, subject, and as such is considered by many as being non-admittable to the elementary grades. To my mind, however, the greatest question before the American people is the correlation or harmonizing of education to environment, and in the majority of localities in Arkansas, this means agriculture and the district school.

The first thing necessary to establish agriculture in our primary grades, is to bring into effect an entire change of attitude on the part of our district schools and their constituents to the importance of their environment. There must be a realization of the fact that the schools must be adapted to the lives of the pupils, and that the lives of the pupils must produce education rather than humble supplicants at the altar of didactics. If the desired attitude is obtained then there will be a redirection and a utilization of these small but most important institutions. They will become a part of the pupils' lives, rather than the pupils becoming a part of them. The pupils will be led to observe themselves and their surroundings, and in such a way as to teach them their relation to the environment.

There is some probability that in some localities the one-room school house will give way to a new type of school, such as the consolidated rural school, but in a great many

quarters this will not take place for decades to come. This being true, it is our duty to improve the present school, in order to meet the needs of the community. In fact, there are good reasons for continuing the one-room school permanently, but it will always have to be changing to keep pace with the trend of educational requirements.

Before stating the needs of the rural school as regards agriculture, it is probably best to mention some of the most important objections to their present condition. It is in rural schools that we find school organization the lowest; teaching in them is not professionalized, being merely used as a means of advancement to better things; teaching tenure and salary are short and low; equipment is practically nothing, and one teacher must handle all subjects. All these conditions compel these schools to be contented with the poorest quality of teaching. But with the coming of better agriculture among the constituents of these schools, most of the present disadvantages will gradually disappear and can therefore be looked upon as only temporary objections. After these obstacles have gone, these small one-room institutions will be the foundation upon which the future welfare of the country will rest. This statement is made upon the belief that the welfare of the country depends upon agriculture, and agriculture in turn upon the home life of the farmer, and the school in closest relation to country life occupies a strategic point in our school system.

The district school should be the embodiment of simplicity, and, should more than any other institution of a kindred nature, be a part and parcel of the community life. It should be free from a rigid grading system, because the mind of the primary pupil does not grasp the value of a grade; and then, a school for grading and a school for teaching are two very different things. A new curriculum is not necessary, but the present one, with small addition, should be taught in terms of the pupils' lives and environment. The school problem should be one of methods of teaching and not one of subjects. The

school should be developed merely from a new viewpoint, and this viewpoint should be the community.

In determining in what form agriculture should be taught in the elementary grades, we must be careful not to isolate it from its environment, because in such an event our objective point is lost. It should forever remain a part of the environment, and should constitute the major part thereof. It should be the pure water of intellectual diet, producing the physiological effect of a well balanced ration.

If the above statement is to be accepted, then we must describe the entire school in order to establish it in its true relation to the environment. It is to have first, a good building, located upon the best land available; it is to be supplied with necessary simple equipment; its curriculum is to be constituted so as to direct the attention of the pupil to the every day affairs of the life of its community; the teacher is to be one well informed as to intent and methods of teaching enumerated; and the constituency is to be well informed that immediate practical instruction is not necessarily the best kind of material to teach, because to single out practical things would be separating out only parts of the environment, resulting in a partial outlook to nature.

The school building should be an expression of neatness and care. The moment it is neglected, it ceases to be the object lesson of self respect, and, in fact, teaches the young mind that appearance is of little importance. It should have an additional room or annex to provide space for storing collections of natural objects, simple equipment of the neighborhood, and to serve as a work shop. In this room the individuality of the pupil would be allowed to express itself, and in turn be diverted toward the immediate affairs of life.

The land upon which the school is to be located should be the best available, rather than the shallow soiled, inaccessible spot similar to those where we find so many of our school houses of today. There is need of growing grass, cultivated plants and trees, all of which come best from good soil. I

know that often it is desirable to place a school house with reference to some landscape scenery, but we must give the picture to the pupil and not to the passer-by.

The equipment of the school is to consist, besides the usual primary charts, globes, etc., of such simple apparatus as can be used in reference to the immediate environment and can be selected with respect to the list of agricultural objects to be studied. Most schools, however, hesitate when the subject of equipment is presented. A good teacher, however, will improvise, and in a great many ways supply equipment at a minimum cost.

The curriculum is to be composed of those subjects which have been given thus far by the district schools, but are to be taught in terms of the environment. For instance, the arithmetic is to deal with problems of rural life, and in such manner as to present agricultural facts. The geography should begin with the school grounds and surroundings. The reading and all work of the school should be in close relationship to the pupils' lives. The most important part of the curriculum, however, is that which is generally termed "nature study". There are many opinions and ideas regarding the importance of this subject, and as regards the manner in which it should be taught. "Nature Study" is probably a misnomer because it does not stand for a study, nor even a subject. It is merely a method or mode of education. Properly presented in the primary grades, it serves as the best foundation for a future presentation of agriculture as a distinct subject.

The teacher for these schools should understand well that the primary schools do not present subjects from the standpoint of occupation, but from that of vitalization; vitalization leading to country life. The teacher should be especially trained in agriculture and home economics as subjects.

The constituency of the school should back it up with a just appreciation of the fact that there is a difference between the value of teaching merely practical subjects and teaching the entire environment. The young mind must be trained to

be sensitive to every object entering into its life, producing acuteness in observation. Acuteness of observation is the one great need of the farmer

The following outline of material is one which has been successful in New York State, and can well serve as a basis for environmental studies in Arkansas:

Air.

Test for moisture.

Test for Carbonic Acid Gas (Lime water, etc.)

Test for ammonia (In school-room and in cow stables)

Seeds.

Germination (per cent.)

Manner of growth (Monocotyledons, etc.)

Plants.

Water taken from soil (use scales)

Transpiration (Collect H_2O)

Examination of nodules of leguminous plants.

Effect of nodules on growth.

Soils.

Search for water-table, different places and times.

Test with litmus paper.

Effect of lime or ashes on clay soil.

Effect of lime on clear and on muddy water.

Correct acidity with lime or ashes (Results observed in growth of clover)

Capillarity under different conditions.

Milk.

Babcock test.

Drill in making measurements, reading bottles, computations.

Test acid with Acidometer.

Acid Test:

Correct measurements, computations of acid.

Milk at different ages.

Under different conditions of cleanliness and temperature.

Bottle and cork tight; keep warm; observe odor; use different samples to compare.

Water.

Test for organic matter.

Bottle with a little sugar; keep warm; observe color, etc.

Use potassium permanganate.

Osmosis.

Using egg.

Using bladder.

Fungicides.

Formaldehyde for oat smut.

Hot water for oat smut.

Bordeaux mixture for potato blight. (Use ferrocyanide test) Computations in each case.

Chemical Action.

Caustic soda solution plus muriatic acid.

Evaporate; find salt.

(Even the chemical formula of this can be taught to pupils at 10 or 12 years of age.)

Commercial Fertilizers.

Handling and mixing nitrate of soda, muriate of potash, and dissolved rock (Computations.)

Cows.

Dairy type (Examine form, milk veins, hide, etc.)

Beef type.

Weather Map.

Receive daily maps and examine location of storm center.

Physical Experiments.

Various kinds, taken from books on physics. Make suction pump with lamp chimney, etc.

Garden.

Place where grasses, seeds, fertilizers, etc. can be studied.

Coordinating with *fungicides* a few *insecticides*, such as paris green, arsenate of lead, kerosene emulsion and hydrocyanic acid gas should be included.

Coordinating with *plants* a preliminary survey of the common *animals* should be made, familiarizing the pupil with animal activities and habits.

The above outline, presented as nature study should cease with the fifth grade. After the fifth grade instruction in agriculture can take on more definiteness as regards the various branches of the subject, and the following summary is offered as a guide to the teachers in their institute work. It consists of a list of the most important facts to be considered, and in its compilation Ferguson & Lewis' Elementary Principles of Agriculture has been followed closely.

FIRST DAY.

Soils.

1. Definition of "soil."
2. Classification of soils.
 - (a) Number of classifications.
 - (b) Basis for each.
3. Method of soil examination.
4. Objects of the examination.
5. How water exists in the soil.
6. The amount of water retained by the various kinds of soils.
7. The amount of water most favorable to plant growth.
8. Soil drainage.

9. The essential elements for plant growth in the soil.
10. The form in which the plants take these elements up.
11. The effect of single cropping upon the soil.
12. Classification of fertilizers.
13. Source of the various fertilizers.
14. Chemical analysis not always a guide to needs of soil as regards fertilizer.
15. Value of composted manure.
16. Most important source of nitrogen.
17. Green manuring.
18. Mechanical condition of the soil.

SECOND DAY.

The Plant :

1. Plants vary as to food requirement.
2. Food of green plants.
3. Cellular structure of plants.
4. The living substance of cells.
5. Structure of seeds.
6. Germination.
7. Root-hairs.
8. Absorbtion of water.
9. Plant substance.
10. Structure of leaves.
11. Function of leaves.
12. Structure of stem.
13. Cambium of stem.
14. Use of the soil to plants.
15. Crop rotation, advantages.
16. Cover and catch crops.
17. Differentiation of leaf and flower buds.
18. Importance of pollination.
19. Forms of pruning.
20. Object of pruning.

21. Different modes of propagation.
22. Variation in plants.
23. Fixation of variation.
24. Hybridization,

THIRD DAY.

Crop Pests and Remedies:

1. Nature of fungus diseases.
2. Nature of bacterial diseases.
3. How fungi live and propagate.
4. Methods of preventing fungus diseases.
5. Bordeaux Mixture.
6. Methods of applying sprays.
7. Frequency of spraying.
8. Treatment of smuts.
9. Cotton-root rot.
10. Relation of insects to other animals.
11. Changes in form in growth of insects.
12. Manner in which insects feed.
13. Classification of insecticides.
14. Corn insects.
15. The Boll-worm.
16. The Boll-weevil.
17. Plant lice.
18. San Jose Scale.
19. Insect injuries to stored grain.
20. Ichneumon Flies.
21. Lady bugs.

FOURTH DAY.

Animal Husbandry:

1. Utilizing farm crops.

2. Selection of farm animals.
3. Origin of breeds.
4. Beef breeds, giving important types.
5. Points and measurements to be observed in judging cattle.
6. The dual-purpose breeds.
7. Breeds of horses, giving important types.
8. Points and measurements to be observed in judging horses.
9. Breeds of hogs.
10. Lard and bacon type.
11. Value of different cuts of pork used by butchers.
12. Breeds of sheep.
13. Classes of poultry.
14. Artificial incubation.
15. Care of young poultry.
16. Poultry judging.
17. Farm dairying—
 - (a) Distinctive quality of the dairy cow.
 - (b) The Babcock test.
 - (c) Composition of milk.
 - (d) Changes in milk.
 - (e) Effect of feed upon flow of milk.
 - (f) Methods of creaming.
 - (g) Churning.
 - (h) Judging butter.
 - (i) Pasteurization.
18. Nutrition in the animal body.
19. Digestive track of the domestic animals.
20. Nutrients in feeds.
21. Function of the nutrients.
22. Digestibility of nutrients.
23. Ratio of digestible nutrients.
24. Application of ratios.
25. Kinds of rations.
26. Planning a ration.

(The question of nutrition, covered by Nos. 18-26 is of great importance. An animal of an improved breed can easily be purchased, but a knowledge of its diet must be with the owner.)

FIFTH DAY.

Special Topics:

1. Rural homes.
2. Their relation to the landscape.
3. Planning the home lot.
4. School gardens.
5. Planning a school garden.
6. Individual garden.
7. The selection of plants for school garden.
8. The need of forests.
9. Systematic forestry.
10. The exhaustion of our forest resources.
11. Conserving our forests.
12. The U. S. forest service.
13. Tillage tools.
14. Power vs. hand labor.
15. Care of machinery.
16. Influence of machinery on agricultural production.
17. National roads.
18. Need of public highways.
19. Cost of overland transportation.
20. Cost of steam transportation.
21. Effect of road surface on draft.
22. Effect of grade on draft.
23. Effect of width of tire on draft.
24. Good road essentials.
25. Earth roads.
26. The split-log drag.

PENMANSHIP.

By D. T. Rogers, Superintendent of Schools, Jonesboro.

FIRST DAY.

I. Purpose of Teaching Penmanship.

To secure the ability to write.

- (a) legibly,
- (b) with rapidity,
- (c) with smoothness and beauty,
- (d) with ease.

II. The Nature of the Exercise.

1. A mental exercise—Fixing in the minds of the pupils the correct forms of the letters and their connections with other letters.
 2. A physical culture exercise—Securing the ability to execute these forms.
 - (a) The ease with which the former is attained.
 - (b) The difficulty in securing the latter.
-

SECOND DAY.

- I. Writing chiefly an exercise in physical culture,—securing the cultivation and control of the muscles necessary to execute the forms easily fixed in the minds of the pupils.

- II. The necessity on the part of the teacher of a proper understanding of the muscles to be cultivated and of methods of cultivation.
 - 1. What muscles should be cultivated?
 - 2. Some exercises which will secure this cultivation.
 - III. The waste of time, energy, and effectiveness in training caused by the use of the finger movement.
-

THIRD DAY.

- I. Proper Position
 - 1. Facing desk.
 - 2. Feet on floor in an easy position.
 - 3. Both hands on desk.
 - 4. Left edge of paper forming an angle of 45 degrees with edge of desk.
 - 5. Both arms resting on muscles of the fore-arm.
 - II. Let the Conductor have each teacher at the Institute assume the proper position. Give a drill in the arm movement, using the muscle of the fore-arm as a cushion for the support of arm, allowing the proper freedom of movement for forming the small letters. Drill in the push-and-pull movement. Make the letters i, u, w.
-

FOURTH DAY.

- I. Drill in the proper forms of letters with reference to
 - 1. Height above the line.
 - 2. Length of some letters below the line.
 - 3. Spacing.
 - 4. Shading.
- II. Criticism by the members of the institute of forms of letters written on the board by some teacher.

- III. Drill in the arm movement led by the Conductor and participated in by all the teachers.
-

FIFTH DAY.

- I. Some difficulties in the way of securing good penmanship.
 1. The frequent change of teachers.
 2. The irregularity of attendance on the part of the pupils.
 3. The great amount of written "busy work" required by some teachers.
 4. Habits of carelessness formed by the pupils at home or at school.
 5. The impatience on the part of teachers to secure immediate results, especially in the lower grades, resulting in the drawing of the letter forms and word forms by the finger movement and the fixing of habits of cramped writing.
- II. Can these difficulties be overcome? How?
- III. Drill in the proper manner of conducting an exercise in writing.

GRAMMAR.

By J. L. McConnell, Principal of Schools, Womble.

Preface.

English in the Public School.

During the first seven years of schoolwork, the pupil should learn to think in clear English and to express his thoughts with ease and accuracy. When he has done this, he has acquired attainments of great practical values, and has laid the necessary foundation for the profitable study of the principles of his language.

During the last year of the grammar school course, the study of technical grammar may be pursued; but only the simpler facts should be learned in the grammar school, the more abstruse parts of the subject being left for the high-school course.

In this work in the common school, the book should not be rigidly adhered to either in the order of topics or the amount given.

It should be kept in the mind by the teacher that the pupil can not express his thoughts clearly until he has clear thoughts.

The first essential in language work is to cause the pupil to think, and to think with as great a degree of clearness as his ability will permit. Do not expect him to express thoughts which he does not possess. By proper appeals to his knowledge of facts and to his imagination, cause him to think; and

then by copious oral drills train him in expression before written work on any topic is required.

In the language work of the first seven grades, many of the practical facts of grammar will be taught by actual usage required of the pupil in his work.

If the teacher has given proper care to the line of work followed, the pupil will habitually avoid the common errors in the use of verb-forms, adjectives, pronouns, adverbs ending in "ly," and will be fairly safe in the concordance of the parts of speech and of their properties.

Many who are teaching seem to think that the use of language will have been fully acquired when the pupil has become adept in diagramming and analyzing sentences made by others. Such ideas would cause us to train the carpenter by having him *wreck* instead of building houses.

I have seen pupils who could correctly diagram and analyze a sentence, but whose lack of training made it impossible for them to appreciate or ever comprehend the beautiful thought expressed in the sentences.

Diagramming is a recitation scheme that may be profitably used if we remember that it is only one of the very many things to be learned in the study of grammar.

If at the close of his seventh grade work, the pupil can not write an ordinary letter, an order to the store, an order for the books he is using, in correct form, his instructor is at fault.

It is conceded by all educators that one of the most important results of school training is the ability to express knowledge in correct, clear, and fluent language. It then follows that an essential feature of every teaching exercise is a drill in the practical use of language, and it should be kept in mind by the teacher that each school subject offers its own peculiar advantages for language drill. The exercises in arithmetic (the most neglected branch as to language) should be models of clearness, and exactness in expression;

if the teacher permits loose, incorrect expressions in this work, he is simply undoing much of his formal work in language, and is losing sight of one of the most important results to be attained by the work done in this branch.

(Exact expression).

Notes.

In the preparation of this work, originality has been strictly avoided; personal egotism suppressed, and no work suggested except such as has been used in the best schools, and fully endorsed by many of the best teachers.

It is suggested that the conductor of the institute assign special topics in the outline to each of the well qualified teachers and require him to illustrate the work indicated.

The attention of the young teacher is called to the fact that this outline does not preclude the use of special textbooks on language work, but is intended to indicate some of the things that should be accomplished in the common school by a systematic course in language.

The experienced teacher will observe that this language course does not poise itself upon the point of technical grammar.

FIRST DAY.

Note:—

It is suggested that a few of the topics in this outline be selected and a plan of developing them in class work be shown.

1¹. LANGUAGE LESSONS.

1². Primary.

1³. Writing words and sentences from the first lessons in reading.

2³ Copying short maxims, proverbs, stanzas of poetry. (Purpose to become familiar with the written form of language).

3³. Dictation work.

- 1⁴. Written as dictated.
- 2⁴. Written from memory of exercises previously dictated.
- 4³. Writing sentences expressing facts derived from observation.
 - 1⁴. Preparation for—
 - 1⁵. An object lesson with a familiar object; as “The apple is round”; “The apple is red”; “The apple is small”; etc. Then these **several** facts may be expressed in one sentence.
 - 2⁵. Oral drill in clear expression.
 - 3⁵. Attention called to punctuation.
 - 2⁴. Desired results.
 - 1⁵. Increased power of observation.
 - 2⁵. Ability to construct sentences.
- 5³. Writing descriptions of present actions.
 - 1⁴. Several simple acts performed by the teacher are to be kept in memory until they are described in the written sentences of the pupils.
 - 2⁴. Results expected.
 - 1⁵. The power of close observation.
 - 2⁵. The power of accurate description.
 - 3⁵. Improved memory.
- 6³. Writing sentences containing given words *carefully* selected.
 - 1⁴. Source of words.
 - 1⁵. The reading lesson.
 - 2⁵. Terms required in the pupils’ vocabulary.
 - 2⁴. Results expected.
 - 1⁵. Increased power of written expression.
 - 2⁵. Enlarged vocabulary.

- 3⁵. The ability to study words.
- 7³. Writing short simple stories from memory.
 - 1⁴. Preparation.
 - 1⁵. The story read or told by the teacher.
 - 2⁵. The story properly told by the pupils.
 - 2⁴. Purpose.
 - 1⁵. Memory drill.
 - 2⁵. Spelling and punctuation drill.
- 8³. Extent of primary drill.
 - 1⁴. The grouping of sentences.
 - 2⁴. The formation of the paragraph.
- 2². Secondary Lessons.
 - 1³. Expressing the leading thought of the reading lessons in written sentences.
 - 1⁴. Preparation for.
 - 1⁵. Thoughts given orally by the pupils.
 - 2⁵. Suggestion and corrections by teacher.
 - 2⁴. Purposes.
 - 1⁵. Book mastery and the study of literature.
 - 2⁵. Drill in expression.
 - 3⁵. Accuracy in written forms.
 - 2³. Writing stories based on pictures.
 - 1⁴. Preparation.
 - 1⁵. Conversations about the picture.
 - 2⁵. Clear oral expression of the story suggested.
 - 2⁴. Purposes.
 - 1⁵. Development of the imagination.
 - 2⁵. Development of the observation.
 - 3⁵. Fluency of expression.
 - 3³. Writing stories from an outline of facts.

- 1⁴. Preparation.
 - 1⁵. Oral discussion of outline.
 - 2⁵. Suggestions by the teacher.
 - 2⁴. Purposes.
 - 1⁵. Drill in logical arrangement.
 - 2⁵. Cultivation of imagination.
-

SECOND DAY.

Note:—See Suggestions for First Day.

- 3². Advanced.
 - 1³. Writing letters.
 - 1⁴. Important features (in social letters).
 - 1⁵. Mechanical arrangement.
 - 1⁶. Heading.
 - 2⁶. Address.
 - 3⁶. Salutation.
 - 4⁶. Body.
 - 5⁶. Ending.
 - 2⁵. Expression.
 - 1⁶. Originality.
 - 2⁶. Fluency.
 - 2⁴. Important features (in business letters).
 - 1⁵. Mechanical.
 - 2⁵. Arrangement.
 - 3⁵. Accuracy.
 - 4⁵. Clearness.
 - 5⁵. Brevity.
 - 2³. Writing business papers.
 - 1⁴. Order to the store.
 - 2⁴. Promissory notes, and due-bills.
 - 3⁴. Merchants' bills.
 - 4⁴. Receipts.

- 5⁴. Checks.
- 6⁴. Drafts.
- 7⁴. Telegrams.
- 3³. Writing descriptions of familiar objects;
as,—a landscape, an animal, a stream, a
mountain, a valley, a house.
 - 1⁴. Preparation.
 - 1⁵. Intelligent observation.
 - 2⁵. Oral discussion.
 - 2⁴. Purposes.
 - 1⁵. Training in observation.
 - 2⁵. Training in accurate description.
- 4³. Writing descriptions of imaginary jour-
neys.
 - 1⁴. Preparation.
 - 1⁵. Knowledge of route.
 - 1⁶. Geographical.
 - 2⁶. Historical.
 - 2⁵. Oral discussion of the relative
importance of facts and their
logical arrangement.
 - 2⁴. Purposes.
 - 1⁵. Acquisition of knowledge.
 - 2⁵. Fluency in description.
- 5³. Brief narratives of personal experiences.
- 6³. Brief, clear descriptions of current events—
Storms, floods, fires, social occurrences,
historical occurrences, discoveries in
science, inventions, etc.
- 7³. Biographical sketches.
 - 1⁴. Subject matter.
 - 1⁵. Lives of public benefactors.
 - 1⁶. Authors.
 - 2⁶. Leaders in industrial prog-
ress
 - 3⁶. Philanthropists.

- 4⁶. Teachers.
- 2⁴. Results expected.
 - 1⁵. Awaken general interest.
 - 2⁵. Develop patriotism.
 - 3⁵. Ability to express thoughts.
 - 1⁶. Accurately.
 - 2⁶. Briefly.
 - 3⁶. Chronologically.
- 8³. Brief essays on themes well adapted to the capability of the pupil.
 - 1⁴. Preparation.
 - 1⁵. Abundant knowledge of the subject.
 - 2⁵. The reading of selections noted for simplicity of style—authors suggested: Addison, Defoe, Irving, Franklin.
 - 2⁴. Results expected.
 - 1⁵. Simplicity of style.
 - 2⁵. Increased power to acquire and to express knowledge.

THIRD DAY.

Note:—It is suggested that this day be given to the study of the cases of substantives.

Introduce the study of each case by having the pupils observe the relations of substantives in other words in the sentences selected by the conductor, then to understand why and how these relations are named.

- 1¹. Substantives.
 - 1². Classes.
 - 1³. Noun.
 - 1⁴. Proper.
 - 2⁴. Common.

- 1⁵. Class.
- 2⁵. Abstract.
- 3⁵. Collective.
- 2³. Pronoun.
 - 1⁴. Personal, simple, compound.
 - 2⁴. Relative, simple, compound, double, compound-double.*
 - 3⁴. Interrogative.
- 2². Properties.
 - 1³. Person.
 - 2³. Number.
 - 3³. Gender.
 - 4³. Case.
 - 1⁴. Nominative.
 - 1⁵. Constructions or uses.
 - 1⁶. Dependent.
 - 1⁷. Subject of a finite verb.
 - 2⁷. Complements.
 - 1⁸. Of a copulative verb whose subject is nominative.
 - 2⁸. Of a copulative participle whose subject is possessive.
 - 3⁷. In opposition.
 - 1⁸. With a word.
 - 2⁸. With a phrase.
 - 3⁸. With a clause.
- 2⁶. Independent or absolute.
 - 1⁷. By a direct address.
 - 2⁷. By exclamation.
 - 3⁷. By pleonasm.
 - 4⁷. By inscription.
 - 5⁷. With a participle.
 - 6⁷. In apposition.

- 2⁴. Possessive.
 - 1⁵. Grammatical.
 - 2⁵. Idiomatic.
 - 3⁵. Rules for formation of
- 3⁴. Objective.
 - 1⁵. The object of a transitive verb.
 - 2⁵. The object of a preposition.
 - 3⁵. The subject of an infinitive.
 - 4⁵. The complement of an infinitive.
 - 5⁵. The complement of an infinitive copula whose subject is objective
 - 6⁵. In apposition.

FOURTH DAY.

Note :

The conductor is expected to use his own judgment in selecting from this outline. However, it is suggested that the time of at least one lesson be given to teaching some of the properties of the verb inductively. Introduce the study of the property by having its usage in sentences observed.

For the study of mode, I suggest sentences similar to the following :

Mary is here.

Mary may be here.

I wish that Mary were here.

Mary, be here at noon.

I want Mary to be here.

Mary being here, I shall remain.

From the uses of the verb "be" and other suitable illustration the study of mode may be inductively pursued.

1¹. VERBS.

1². Classes.

- 1³. With relation to subjects.
 - 1⁴. Finite.
 - 2⁴. Infinite.
 - 1⁵. Infinitive.
 - 2⁵. Participle.
- 2³. With relation to subjects.
 - 1⁴. Transitive.
 - 2⁴. Intransitive.
- 3³. With relation to completeness of predication.
 - 1⁴. Attributive; "He works."
 - 2⁴. Copulative; "He is industrious."
- 4³. With relation to form.
 - 1⁴. Regular.
 - 2⁴. Irregular.
 - 1⁵. Complete.
 - 2⁵. Redundant.
 - 3⁵. Defective.
- 5³. With relation to rank
 - 1⁴. Principal.
 - 2⁴. Auxiliary.
- 2². Parts.
 - 1³. Principal.
 - 1⁴. Present indicative.
 - 2⁴. Past indicative.
 - 3⁴. Perfect participle.
 - 2³. Auxiliary.
- 3². Properties.
 - 1.³ Voice.
 - 1⁴. Active.
 - 2⁴. Passive.
 - 2.³ Mode.
 - 1⁴. Indicative.
 - 2⁴. Potential.
 - 3⁴. Subjective.

- 4⁴. Imperative.
- 5⁴. Infinitive.
- 6⁴. Participle.
- 3.³ Tense.
 - 1⁴. Primary.
 - 1⁵. Present.
 - 2⁵. Past.
 - 3⁵. Future.
 - 2⁴. Secondary.
 - 1⁵. Present perfect.
 - 2⁵. Past perfect.
 - 3⁵. Future perfect.
- 4.³ Person.
- 5.³ Number

FIFTH DAY.

Correct such of the following sentences as require correction; diagram and analyze them; parse words in italics.

1. I should be pleased to hear from you at any time.
2. If I did need money, I would not ask you for it.
3. Five *religious* young ladies *entered* the room; and a tall *straight* dignified matron seated them.

(Insert the necessary commas.)

4. I intended to have gone to church.
5. *He* is believed to have written the story before the *Civil War*.

6. He *that* hates others, we are *apt* to hate.

7. We laid down at an early hour and slept *till* morning; and on raising found the table had been lain for breakfast, and the other guests were setting around it waiting for *us* to come and set down.

8. *Buell* arrived on the field of Shiloh *just as* Grant was meeting the terrible onslaught of *Bragg*.

9. *It is so warm that we do not like to study.*
10. *The older he grew the wiser he became.*
11. *I left before I heard the news.*
12. *I was given a book that was considered as authority on the subject.*
13. *He would make a better farmer than teacher.*
14. *The boy was pleased with what he received.*
15. *The man asked, "Why does not the boy work at the factory where his brother works"?*
16. *The girl opened the window, which cooled the room.*
17. *War having been declared, General Taylor was ordered to invade Mexico, and it seemed to him an easy task to conquer wherever he went.*
18. *He waited sixty minutes, a full hour to hear the hour strike.*
19. *The crow doth sing as sweetly as the lark when neither is attended.*
20. Tell me not in mournful numbers
 Life is but an empty dream;
 For the soul is dead that slumbers,
 And things are not what they seem.

READING.

By Miss Margaret Walker, Little Rock.

FIRST DAY.

Introductory.

Reading is thinking under the stimulus of the written or printed word or sentence.

Importance.

It is the essential part to the study of all subjects.

A book is a help to further study of what has been seen, heard or experienced.

It may give the view point of another mind, or a special message revealed to the poet. It widens our horizon by helping us know life in a broader way, helps us to interpret its meaning—to create and share its joys. Since reading is of such vast importance, it is necessary that the child master the fundamentals in his early school life, consequently it should be the center around which the entire work of the primary school should revolve. When taught in the light of the new century, it includes sense training, voice culture, games and plays, imaginative work, reasoning and character building.

By the end of the third year the mechanical difficulties should be largely overcome, and the child prepared to enter upon the enjoyment of reading to learn.

Aim In Teaching Reading. To give the child power of getting thought from the written or printed symbol.

Dr. Dewey's ideal, "The child should have a personal interest in what is read, a personal hunger for it, and a personal power of satisfying the appetite", although a high one does not seem unattainable.

That a child may learn to read, it is necessary that he have this personal hunger, for it is only when he desires to learn that he becomes self-active, and self-activity in all work is the keynote of success.

Difficulties Encountered. In teaching little children occasionally we find a child who has no desire to read. This may be due:

1. To immaturity—resulting in lack of power to concentrate; poor visualization; slowness in interpreting the spoken word.

2. To over development—having waited too long before learning to read. In such cases the mechanical side is irksome, because the subject matter is beneath the intellectual enjoyment.

3. To having heard no stories at home—and consequently knowing nothing of the joys of story-land.

4. To over-indulgence in stories at home, having no need for self exertion.

Criteria for Selection of Material. In selecting material for reading lessons, it is necessary to consider the child's tastes and interests, his ability to comprehend and appreciate and the demands of his emotional nature. Failure in this line results in a lack of personal interest. The child becomes inactive in thought and feeling. The reading matter to interest the child must be simple, but at the same time have some dramatic action to arouse his curiosity, some personality to appeal to his love and sympathy, and simple situations which he can easily picture. It is in meeting these demands that our primers and first readers so woefully fail.

Method. A combination method composed of the strongest points of the Thought, Action, Word and Phonic methods is advised.

The Thought method secures the right spirit, smoothness, naturalness, and excellent reading matter.

The Action method connects school and play, gives physical exercise, helps expression, quickens perception, arouses interest and makes children happy.

The word method gives drill upon words, helps to avoid guessing, and hastens results.

The Phonic method gives the key to independence, removes the strain from the visual memory—trains the voice, helps in enunciations, and gives conscious strength in forming new words, and in recognizing old ones.

FIRST GRADE.

The earliest lessons are given from the black-board, or chart prepared by the teacher. The black-board chart, or hectograph slips are used exclusively during the first six weeks.

Print is used from the first. This is done because the greater part of the written matter with which the child comes in contact is printed, and it avoids the transition from script to print, which usually means loss of time.

1. Material for early lessons. The early lessons are based upon objects; pictures; natural science; literature.

2. Preparation consists of arousing interest through observation; story.

3. Development consists of recalling previous conversation; placing sentences, given by pupils, on black-board, or bulletin board; reading of sentences by pupils; drilling on sentences as units; mixing the sentences—reading of “story”

as a unity; illustrating by blackboard drawings, paper cutting—or clay.

Later work deals with the introduction of new sentences as—units; distinguishing between the old and new; differentiation of words; introduction of new words as child needs them to express thought.

Introduction of action words, conversational phrases and new idioms to give variety, drill by means of games, cards and drawings until the symbol and the thought behind it are the child's own.

In the introduction of new sentences, phrases, idioms and words, haste must be made slowly, as thoroughness is the primary essential of success.

Time.

As a child of six is incapable of prolonged attention, the first lessons must be of short duration, not exceeding ten minutes.

Briskness and intense interest should characterize them, as well as all subsequent ones.

Grouping. The attention and interest depend largely upon the active share the child takes in the lesson, hence the necessity for small groups. In forming the groups, the ability of the child should be taken into consideration. The slower children become inattentive because of inability to follow the brighter; the brighter become inattentive waiting for the slower to work out something they already know.

(Some object to this system of grading on the ground that the quicker children stimulate the weaker ones, but it is found that even when this division is made, there are always some of the group who furnish impetus for the rest.)

Thought. From the first, the child's attention, when he reads, should be centered upon getting the thought. Mere repetition of words and sentences is not reading. Reading is thought getting—oral reading is thought giving.

Means of Getting the Thought. Relating reading matter to other subjects; skillful questioning, rapid black-board sketching; pictures and dramatization are aids in getting the thought.

(In the effort to assist thought getting, there is danger of distracting the child's attention by too many illustrations. The same danger is found in the use of pictures. If wisely selected and carefully studied, they awaken interest and give a good background for reading, but if too many are used the child becomes dependent upon illustration, and the power to create his own pictures is weakened.)

Influence of thought reading upon the child's attitude toward reading. In working for the thought, the child is attentive and active in finding new words, for he feels the need of them. Thus he gains many words from the content.

In striving to give the thought he has discovered to others, he uses every means to make the idea clear, and good expression results.

Reading for Others. That a child may feel he is reading for the pleasure of others, he should face the class when he reads, or select a story previously read, and read it to the room. This leads him to feel the necessity of reading clearly and distinctly, cultivating a pleasing voice, and gives the self-confidence essential to all good oral reading.

Fluent Reading. The greatest causes of hesitation, repetition, stumbling and mistakes in primary reading are due to timidity, uncertainty in regard to word forms, separating the article from the word following, and insufficient drill in phrasing.

The greatest needs are to win the confidence of the child, teach the words thoroughly, the article as the unaccented syllable of the word following and give unceasing drill on phrases as units.

The latter is one of the surest means of securing smoothness, since thought is expressed in groups, and speed in get-

ting it depends upon ability to grasp several words at a glance.

To insure fluent reading the child should be required to glance over each sentence before reading it aloud.

Phonics. Phonic work begins in the First Grade by learning the sounds of consonants—the sounds being discovered from the slow pronunciation of words. These are fixed by means of stories, pictures, and much repetition given in games. The development of words from this beginning depends upon the system best suited to the basal reader.

From the work in phonics, primary pupils should recognize by sight alone, new words closely resembling those already known; gain skill in enunciating clearly, pronouncing correctly, and making new words accurately. Phonics assist in training the ear and eye in modulation, pitch, emphasis, and the power to project tone.

Every phonic drill should be preceded by a breathing exercise. The pupils should have practice in recognizing sounds; imitating sounds; giving sounds when symbols are shown; thinking sounds when symbols are shown; recognizing words when separate sounds are given by the teacher; spelling words by sound; making new words from given lists or sentences.

The alphabet is learned incidentally through spelling and writing.

Supplementary Reading. Each grade should have several sets of readers, somewhat less difficult than the basal readers, and these with the original stories made by teachers and pupils, nature observations and rhymes furnish sufficient supplementary work.

The work is given to insure greater proficiency in the recognition and pronunciation of words and phrases, to give greater power to gather thought from sentence and paragraph, to develop fluency in reading.

(Original stories, nature observations and rhymes are given from black-board, or from typewritten, or hectograph slips.)

SECOND DAY.

SECOND GRADE.

Conditions. The step from First to Second Grade is a long, hard one, often resulting in discouragement to children.

In Second Grade new ideas are constantly introduced; sentences made longer by introduction of phrases and union of clauses. Lessons are read largely by paragraphs, through continuous pages. The child is expected to continue the independent pronunciation of words by means of more serious lessons in phonics; to prepare the lesson with less assistance from the teacher; objective illustrations are not so freely used; and there are fewer pictures to aid in interpretation.

Need of Reviews. The difficulties of the first weeks may be largely overcome by having the class re-read the last half of several good first readers.

This secures certainty of vocabulary; intelligent and accurate reading; gives fluency; confidence; and lays the foundation for advance.

Teaching Children to Study. Among the first steps toward actual study are:

1. Rapid recognition and thorough understanding of words, phrases and idioms previously used.
2. Enabling the child to tell instantly the words he knows, and select without hesitation those he does not know.
3. Creating a desire for knowing the pronunciation and meaning of new words in the regular reading lesson and elsewhere.
4. By making the pupil self helpful.

Expression. In this grade where pupils are so largely intent on mastering new words, much stress must necessarily be placed on expression.

Expression is dependent upon:

1. Ability to pronounce words correctly and utter phrases smoothly.

2. Understanding the sentences.
3. Sympathy with what is read.
4. Natural tone.
5. Freedom from self consciousness.
6. Desire to interest others.

In striving for expression all terms relating to reading should be omitted.

Expression must come from feeling and sentiment, not from imitation.

No errors in pronunciation or articulation should be allowed, but criticism should be made in a friendly way, so as not to wound.

As a rule, pupils should not be interrupted while reading.

Standards for Pupils.

1. Children should stand erect, with shoulders well thrown back.

2. Books should be held in left hand, as far from the eye as to be easily seen and not high enough to hide the mouth.

3. There should be a sureness of the words and meaning of the sentence before beginning to read.

4. A deep breath should be taken before trying to read.

5. The reading should be loud enough to be heard by all those who are listening.

6. It should be slow enough, so that each word may be distinctly heard.

Demonstrate with class the development of Second Grade story or poem.

THIRD DAY.

THIRD GRADE.

Conditions. The pupil brings to this grade stronger and better trained powers of observation; an extensive and well

established vocabulary; the ability to read Second Grade matter intelligently; considerable facility in the use of phonics and syllabication; a knowledge of school routine; some ability to study a reading lesson independently.

In teaching, all the previous steps must be retained, but in different proportions. When words are not easily reached by phonics, the word method is used, syllabication also, and phonics applied to the parts of the word where hesitation is caused by uncertainty in regard to correctly pronouncing a syllable.

All reading lessons in this year deal with connected sentences; paragraphs, stanzas, entire poems and stories.

The sentiment of a selection is constantly searched for. new words are taught as incidents needed to reach the meaning of the whole sentence—not as ends in themselves. The same is true of phrases and idioms.

The recognition of groups of words should be practiced daily, and the children trained to look ahead for the immediate recognition of phrases. They should be taught to see that the group ends with the comma, and to breathe before the group is finished will spoil the meaning.

Breathing. Every exercise in reading should be preceded by a short breathing exercise—the pupils standing. The breath should be taken into the lungs through the nose, the breathing should be deep but gentle, the inhaling and exhaling done without undue effort.

Pupils should be trained to fill the lungs before beginning to read, and to breathe naturally at every convenient pause. This will prevent the sense of hurry and fatigue that comes when the breath is suddenly exhausted.

Correct breathing will enable pupils to read phrases and clauses through with smoothness and is one of the best preventives of colds, sore throat, and catarrhal troubles.

Bad Habits. The rapid growth of this period is sometimes the cause of indolence, which results in awkward move-

ments and bad habits. Among these are being slow to rise when called upon, standing with weight on one foot, knees loosely bent, resting on desk, beginning to read while rising from seat, beginning to sit down while reading the last sentence.

As bodily movements react upon the mind careless movements beget careless thinking, and therefore should not be tolerated.

Intense interest should dominate the lesson permitting no slouching in thinking, sitting or standing.

Phonics. Phonics for third year include thorough and frequent review of work in first and second years; the rapid and thorough teaching of new phonograms, blends, endings and syllables; frequent drills in enunciation, articulation and pronunciation.

To secure projection of tone, flexibility and smoothness, introduce special exercises as Tennyson's "Blow, Bugle, Blow"—or "Sweet and Low".

To secure emphasis and vigorous expression, such poems as Miller's "Columbus"—"Sail On! and On! and On!" and "Charge, Chester, Charge", will be helpful.

Such poems may be posted on black-board and left for drill.

The words are soon learned, though poem is in advance of Third Grade.

Sight Reading. Sight reading is reading required without preparation.

As there is no definite preparation the first year, sight reading takes the form of rapid review of words and phrases given from black-board, chart or cards.

In Second Grade difficult words, longer phrases and simpler parts of First Readers are used. In Third Grade phrases are considerably lengthened, and these with simple sentences and reviews from earlier lessons and Second Readers furnish material.

Sight reading gives practice in rapid recognition of words, and serves as a test of the reading vocabulary.

Silent and Oral Reading. Through silent reading thought is gathered from the printed pages; by oral reading, the thought in the author's words is given to others.

During the first three years the amount is nearly the same, but in later years, silent reading largely predominates.

Through oral reading the accuracy of silent reading is tested. It also gives opportunity for training in emphasis, inflection, pauses, and all the essentials of good reading.

GENERAL.

Relation of Reading to Other Subjects. Every text book is a supplement to the reading book. From daily experience in reading problems, geography and history, the child sees the necessity of reading correctly and understandingly. This is a strong incentive to mental work, and a wonderful help in reading, as all work must be carefully done.

Reading as An Accomplishment. Reading as a means of giving intellectual pleasure to others is scarcely considered today, and the fact is deplorable.

Teachers should strive to awaken among their pupils an appreciation of oral reading as an artistic accomplishment of great and lasting value.

To do this, teachers should become good readers themselves, and find frequent occasion to read aloud to their pupils, thus proving that a good reader is able to give pleasure to others, and establishing a standard for the pupils.

Pupils should be encouraged to read selections before the school and the family at home.

They should be made to feel that thoroughly cultured people enjoy a good reader, as much as they do good music.

“No branch of study has a greater educating power than reading, and yet we have very few who can read even intelligibly. (Horace Mann.)

Cause of Poor Reading in Our Schools.

1. Defective vocal organs.
2. Nervousness.
3. Failure of teachers to appreciate the value of reading.
4. Failure of teachers to read well themselves.
5. Children are hurried from grade to grade too rapidly.
6. Too much required in the grades.
7. Not enough supplementary reading.
8. Children do not feel the need of reading other than regular books.
9. Selections often too difficult for pupils.
10. Interest lost through lack of variety and dramatic element in the subject matter.
11. Insufficient exercise of the imagination.
12. Teacher's lack of ability to make difficult points of the reading clear.
13. Unskillful questioning.
14. Failure to secure and use illustrative material properly.
15. Poor and monotonous methods.
16. Lack of sympathy in teachers and pupils leading to failure of interpretation.
17. Insufficient training of vocal organs by means of exercises for articulation, inflection, emphasis and voice projection.

FOURTH DAY.

SUGGESTIVE MATERIAL FOR READING LESSONS.

Myths, Fables, Legends. Child nature reaches out for reading matter that is beyond the common place, and welcomes stories and poems that embody the unusual, the remote, the nobler and higher relations of life. The imagination readily

grasps the characters and situations in the myths, legends and fairy tales, fables and poems—all of which form valuable reading matter if judiciously given.

That these may meet the demands of the third and fourth year pupils, they should possess the following characteristics:

1. They should be based on suitable topics—viz—animal life, plant life, natural phenomena, and physical features of the earth.

2. There should be simplicity of idea—no complexity of plot, no crowding of ideas, the characters should be few, the action rapid and direct—the child's imagination supplying the setting needed.

3. Language should be simple and elevating; sentences short and direct to keep the situation dramatic.

4. The moral should be easily apparent and comes as the inevitable outcome of the situation.

5. There should be no morbid feeling as the result of reading and the sense of justice should be satisfied without calling forth revenge. Pity, tenderness, forbearance and noble motives, portrayed in these imaginary characters, live again in the child.

Racial Literature.

Children delight in reading stories and poems relating to other times, countries and races, and are intensely interested in what other children do and say; hence the introduction of racial literature should take the form of stories and poems of children.

There is an abundance of this kind of literature—poems and books, that give graphic pictures of racial differences in physique, clothing, home life and customs.

Introduction of Standard Literature. The early introduction of permanent literature, based upon topics of vital interest to children, can not be too heartily commended. This inculcates the reading habit, gives a happy introduction into

the world of letters, and develops interest in the libraries and the books they contain.

To create a love for good literature, should be the controlling thought of every teacher. The work must begin early, and the way be prepared.

1. By establishing a good vocabulary.
2. By arousing interest in the outside world.
3. By waiting for the right degree of maturity.

"To be able to read, and not have a love for good literature is dangerous; to be able to read and have a love for bad books is calamitous; to be able to read and have an unswerving desire for only the best that the books contain is the safeguard of youth—the solace of old age."

Bibliography of Books and Poems Helpful in the Grades.

- I. Lights to Literature—Book I; Holton Primer; Aesop's Fables; Holbrook's Hiawatha Primer; Mary Smith's Eskimo Stories; Bass' Beginners' Reader; Cyr's First Reader; Sunbonnet Babies; Aldine Primer; Aldine First Reader; Mother Goose Rhymes; Rhymes from Rosetti.
- II. Lights to Literature—Book II; Blodgett Reader; The Culture Reader; Aldine Second Reader; Dopp's, The Tree Dwellers; The Early Cave Men; The Later Cave Men; Waterloo's Story of Ab; Rhymes From Rosetti; Simple Poems From Stevenson.
- III. Shaw's Big People and Little People of Other Lands; Baldwin's Fifty Famous Stories; Brooks' Stories of the Red Children; Andrew's Seven Little Sisters; Scudder's Book of Fables; Chance's Little Folks of Many Lands; Stories of American Life and Adventure; M. Helen Beckwith's, In Mythland; Scudder's Fables and Folk Stories; Stevenson's Child's Garden of Verse; Dodge's Rhymes and Jingles; Poems From Field.

- IV. Great Americans for Little Americans, Eggleston; Selections From Arabian Nights, given in Heart of Oak Books No. 3; Mabie's Easy Stories Every Child Should Know; Kingsley's Greek Heroes; Kipling's Jungle Book; Story of Siegfried; Hawthorne's Wonder Book; Carpenter's North America; Poems From Golden Numbers; and poems every child should know as "The Mountain and the Squirrel"; "How the Leaves Came Down"; Autumn poems; Christmas poems.
- V. Pyle's Robin Hood; Rip Van Winkle; Legends of Sleepy Hollow; Moore's Pilgrims and Puritans; Dodge's Hans Bunker; Mabie's Myths Every Child Should Know, and Poems of the Seasons.
- VI. Ten Boys on the Road From Long Ago to Now; Guerber's Story of the Greeks; Hall's Men of Old Greece; Kipling's Captains Courageous; Paul Revere's Ride; Horatius at the Bridge, and kindred poems; Burrough's Signs and Seasons; Riley's Dream of Autumn; Whittier's Fisherman.
- VII. Lanier's The Boy's King Arthur; Poe's The Gold Bug; Hawthorne's Tales of the White Hills; Leighton's, Lewis and Clark; Brady's, The Conquest of the Southwest; Parkman, The Oregon Trail, Thwaite's Daniel Boone; Old English and Scotch Ballads; Ballad of the East and West.
- VIII. Julius Caesar; Van Dyke's The First Christmas Tree; Lowell's Vision of Sir Launfal; Scott's, Marmion and Douglass; Selections From Ivanhoe; Longfellow's Keramos; Arnold's, Sohrab and Rustum; Pitman's Stories of Old France.

FIFTH DAY.

GRAMMAR GRADES.

In selecting material for oral reading dramatic literature should be chosen.

It should appeal to the higher emotions—love, courage, patriotism; to the sense of beauty and rhythm; and should have the characteristics of a good play. The images should crowd each other; the thought and emotion should be within the child's grasp, or relatively so. It should call into strong, broad action all the agents of expression—thoroughly arouse the imagination, thus developing skill.

The following plan for teaching such literature is suggested by our superintendent, Mr. Cook, and is excellent:

Grade Sixth—Selection, Horatius at the Bridge:

- I Purpose of a story.
 - A word picture that helps us to
 - 1. To see more clearly.
 - 2. To feel more heartily.
 - 3. To act more faithfully.
- II Purpose of reading a poem of this character.
 - 1. To give pleasure.
 - 2. To acquire strength.
 - 3. To quicken correct moral and civic judgment.
 - 4. To cultivate imagination.
 - 5. To present a model of composition.
- III. Teachers' preparation for this work.
 - 1. To possess a good knowledge of both the historical and geographical setting of the lesson.
 - 2. To be able to create the right atmosphere.
 - 3. To be possessed of a good voice and other qualities underlying good reading so that frequent demonstrations can be given by her to the class.
 - 4. To be able to recite some choice selections of the lesson; the object being effective oral rendering of

those parts which make special appeal to the pupils' imagination and sympathies.

IV. How to tell the story, i. e., read it effectively.

1. Use of voice.
2. Dramatic elements to be emphasized; gestures, intonation, etc. This lesson lends itself to a successful grouping of pupils.
 - (a) Into two general divisions, the Romans; the Etruscans.
 - (b) The volunteers are next chosen.
 - (c) Costumes and other paraphernalia are used and some parts of the story acted by pupils in the school room.

These are the most helpful and by some of our best teachers considered most effectual.

3. Tell the story to the children and not at them. The entire interest must be awakened and sustained.
4. Have pupils draw conclusions and deductions as to patriotic duty and its value. Let them tell of some heroic service either observed or read about. Let them explain "Peace hath her Victory no less renowned than War".
5. Have different pupils tell the story to the class.

V. How to choose the story or lesson.

1. It must fulfill the purpose of a story, and the teacher should do sufficient preparatory work on the pupils to arouse an interest for the lessons to be learned in the study of a given masterpiece.
2. Let it be known that the ability to read well one or two masterpieces of this kind gives power, strength, keenness of discrimination and taste to select and execute other pieces of composition and is in itself a valuable achievement on the part of a pupil.

Conclusion.

Reading: The following is suggested as a general plan

for appreciative reading of this masterpiece of English literature.

1. Reading for general conception; some portions read by the teacher for the purpose of creating a right atmosphere; other portions read aloud by pupils in the class; all the poem read at home by each pupil.
2. Reading for the more careful treatment of important parts, the aim being to bring about an appreciation of the beauty of the selection, rather than to accumulate a fund of information concerning words or illusions.
3. Reading for effective oral rendering of those parts of the selection which make special appeals to the pupils' imagination and sympathies.
4. This poem is rich in sketch work and should be in some of its parts reproduced, illustrated and memorized—Love of home and country in general—a beautiful patriotic selection—no grander ending than to die for one's country.

ARKANSAS HISTORY.

By T. E. Guerin, Principal of Schools, England.

FIRST DAY.

1. Why should special importance be given to the study of our state history?
2. Review briefly the periods of exploration, and settlement.
3. Growth and development of our school system.
 - (a) The gift of Congress in 1827.
 - (b) The first law concerning public schools, 1829.
 - (c) The 16th section compact with the United States.
 - (d) Provision of the constitution of Arkansas.
 - (e) The common school law act of 1843.
 - (f) Land grant act of congress, 1862.
4. Biography.

Robert Crittenden, Albert Pike, Chester Ashley.
5. Story.

The Arkansas Traveler. (How has this story injured our state?)
6. Queries.

Who was called "Father of Louisiana"? Who was "Cruel O'Reilly"? What was the first mail route in Arkansas? Why was William E. Woodruff important in the early history of our state? Where was the first court held in Arkansas? Who were the first United States senators?

SECOND DAY.

1. How do our schools compare with the schools of our neighboring states? (Note our strong points. and our weak points.)
2. Growth and development of our school system—continued.
 - (a) The Arkansas Industrial University--the University of Arkansas.
 - (b) Office of Superintendent of Public Instruction.
 - (c) The State Teachers' Association
 - (d) Pine Bluff Branch Normal College.
 - (e) The Morrill fund.
3. Biography.

Ambrose H. Sevier (commissioner in peace negotiation between U. S. and Mexico), Benjamin Johnson, Andrew Hunter.
4. Story.

The Dwight Mission.
5. Queries.

Who was the first superintendent of public instruction in Arkansas? Who was the first president of our state university? What was the first incorporated town in our state? Which governor said, "I'll try, sir".
6. Review the most important events in the territorial period, 1819-1836.

THIRD DAY.

1. How do you teach Arkansas history? (Discussion).
2. Growth and development of our schools—continued.
 - (a) Amendment No. 8.
 - (b) Arkansas State Normal.

- (c) The four agricultural schools.
 - (d) Our benevolent institutions.
 - (e) Denominational colleges.
3. Biography.
Solon Borland (Minister to Nicaragua), Patrick R. Cleburne, Clifton R. Breckinridge (Ambassador to Russia).
 4. Story.
Saracen and the Stolen Children.
 5. Queries.
When was the county in which you live formed? What was its first county seat? Where was the first settlement made? What is the population of the county? What are the chief products?
 6. Note the part Arkansas has taken in the great expositions of the country.

FOURTH DAY.

1. The Rhodes Scholarships. (Their value, how secured, etc.)
2. Name the governors in chronological order, beginning with James Conway and ending with Powell Clayton, and discuss at least one important event in the administration of each. (Omit acting governors.)
3. Biography.
James H. Berry, James K. Jones (Chairman National Democratic Committee), James P. Eagle.
4. Story.
Duel between Thos. W. Newton and Ambrose H. Sevier.
5. Queries.
Who was the first native Arkansan to become governor of Arkansas? What Arkansan was a member

of the Dawe's Commission? How many constitutions has Arkansas had? When was the present constitution adopted? What is the source of our school fund?

6. Our chief agricultural products. Our natural resources.

FIFTH DAY.

1. The School Improvement Association.
2. Governors—continued as above—beginning with Baxter and ending with Fishback.
3. Biography.
Augustus H. Garland (Attorney General of the United States). Powell Clayton (Minister to Mexico), Judge U. M. Rose (Delegate to Peace Congress.)
4. Story.
“The fine old Arkansas Gentleman, close to the Choctaw line.”
5. Queries.
Which state has given Arkansas the greatest number of governors? What was the population of Arkansas in 1870? In 1900? What is known as the Omnibus veto? What flower is our state emblem? Who are our present state officers?
6. Current events. Our leading citizens of today.

UNITED STATES HISTORY.

FIRST DAY.

By J. P. Womack, Superintendent Schools, Magnolia.

OUR PUBLIC DOMAIN.

Part I.

To the Conductor: Have a good wall map of North America in sight, also an outline map of the United States.

I. Three Recognized Ways of Acquiring New Territory.

1. By discovery.
2. By exploration and settlement.
3. By conquest.

II. How England Came Into Possession of North America.

1. By the discoveries of the Cabots. (Have some one point out on the map the places visited, giving names and dates. Do likewise by the discoveries of Spain and France by way of comparison and correlation.)

2. By the explorations or attempted settlements of Raleigh, Drake, Gilbert, Frobisher, Amadas, Barlowe, Pring, Weymouth and others. (As under I, have all points mentioned indicated on map. Point out also the explorations and settlements of the Spanish French and Dutch. Drill on names and dates.)

By the settlement of the thirteen colonies. (While the Conductor is conducting a rapid drill on

the important names, events, and dates of the colonization period, some one should shade the outline map in colors to represent the different colonies, indicating by dotted lines the boundaries of the colonies having "Sea to Sea" grants. The location of all settlements of other nations should be indicated also.)

3. By the conquest of:

- I. *New York, with New Jersey, in 1664.*
- II. *The portion of the Mississippi valley lying between the Lakes and the Gulf in 1763.*
Florida (How did England acquire Florida?)

Part Two.

Having won our independence from England, we came into possession of all lands held by the colonies in 1783. The colonies having sea to sea grants, and those having lands outside their proper boundaries, ceded these tracts to the general government, thus giving to the general government a public domain. (At this point the Conductor should have some one indicate the tracts ceded to the government. The status of Florida at this time should be briefly noted.)

Our public domain has been enlarged as follows:

- I. *By the Purchase of Louisiana in 1803.*
- II. *By the Purchase of Florida in 1819.*
- III. *By the Annexation of Texas in 1845.*
- IV. *By the acquisition of Oregon in 1846, which had prior to that time been held in joint occupation with England.*
- V. *By the conquest 1846-8 of the country now embraced by California, Nevada, Utah, Arizona and half of New Mexico.*
- VI. *By the Gadsden Purchase in 1853.*
- VII. *By the purchase of Alaska in 1867.*
- VIII. *By the Annexation of Hawaii in 1898.*
- IX. *By the conquest of Porto Rico, the Philippines, and Guam in 1898.*

X. *By the acquisition of Tutuila by treaty with Great Britain and Germany in 1898.*

Suggestive Questions:

1. Was Jefferson consistent in the purchase of Louisiana?
2. Was Polk justifiable in allowing England to fix the northwest boundary line?
3. What was the Freeport Doctrine? Contrast it with the Prohibition platform.
4. What led Seward to negotiate the purchase of Alaska?
5. Did the U. S. abandon the Monroe Doctrine in 1898? Why?
6. Does the constitution follow the flag?

SECOND DAY.

POLITICAL PARTIES.

To the Conductor: It is an excellent plan to teach the rise, growth and development of the parties graphically. One good way is as follows: Draw on the black-board (the class using tablets), 31 parallel lines at equal distances. The wider the spaces the better. Now beginning at a short distance from the first line, draw two rivers, having a common source and running in the same general direction across the parallel lines. These lines represent the administrations. The relative strength of the parties at the various periods can be roughly represented by the size of the streams. The various splits and fusions can be represented by branches which leave the main channels, and after running an independent course for a time, reunite with the main stream or go to join the other stream or a branch from that stream. It would be well to make such a drawing and then conduct the entire lesson from it, the manuals being closed. Not only should the class be

able to say that Polk was elected in 1844, for example, but it should be able to explain clearly why Clay was NOT elected at that time. The drill should be continued till every member of the class can explain every detail of the drawing.

I. *Federalists.*

1. Came into being with the agitation of the question of the formation of the union.
2. Composed of those favoring the Constitution as against those who favored the Articles of Confederation with amendments.
3. Stood for a strong national government as opposed to strong state governments.
4. Favored a loose construction of the Constitution.
5. Was dominated by Washington and Hamilton.
6. Elected Washington and Adams to the presidency.
7. Created the Bank of the United States.
8. Established the credit of the country.
9. Funded the debts of the Confederation in their various forms.
10. Assumed, in the face of strong opposition, the state debts, i. e., those incurred by the States in the prosecution of the Revolutionary War.
11. Laid the foundation of the tariff system of the present day.
12. Lost prestige.
 - (a) By the passage of the Alien and Sedition laws.
 - (b) On account of Jay's treaty with England.
 - (c) Because of its friendliness to England in spite of her semi-hostile attitude toward us.
 - (d) As a result of the loss, by death, of Washington and Hamilton.
 - (e) By its opposition to the purchase of Louisiana.
 - (f) Because of its opposition to the war of 1812.

- (g) As a result of its refusal to pay the taxes voted to carry on that war.
- (h) By its attitude in the Hartford convention.
- (i) As a result of the rising tide of democracy in the lusty, growing West, and the coming into prominence of men like Jefferson and Jackson.
- (j) Finally, because its work was done.

II. *Anti-Federalists, Republicans, Democratic Republicans.*

1. Composed at first of the opponents of the Federal Government, but came to include all who opposed—
 - (a) A strong, centralized government.
 - (b) The assumption of the state debts.
 - (c) The U. S. Bank.
 - (d) The limitation of the rights of the states by the Federal Government.
 - (e) Formality and display in the offices of government.
 - (f) The loose construction of the Constitution.
2. Grew stronger after 1787 because of.
 - (a) The disintegration of the Federalist party.
 - (b) The prestige of its great leaders, Jefferson and Madison.
 - (c) Its advocacy of low tariff.
 - (d) Its economical administration of public affairs.
 - (e). Its success in freeing the Mississippi from restraint.
 - (f) Its successful prosecution of the war of 1812.
 - (g) A reaction, notably in the rising West, against the aristocratic tendencies of the old regime.

THIRD DAY

Political Parties Continued.

III. *National Republicans.*

1. The remnant of the old Federalist party, re-enforced by a branch of the Republicans who favored—
 - (a) Internal Improvement at Government Expense.
 - (b) Tariff for protection.
 - (c) Rechartering the U. S. Bank.
2. They opposed—
 - (a) The EXTENSION of slavery into the territories.

IV. *Democratic Party Before 1860.*

1. Successor to Democratic-Republican Party. It favored—
 - (a) Tariff for revenue only.
 - (b) Strict construction of the Constitution.
 - (c) The extension of slavery into the territories.
 - (d) The admission of Texas.
 - (e) The admission of California as a free state.
 - (f) The repeal of the Missouri Compromise.
 - (g) The doctrine of States' Rights.
 - (h) Secession.
2. As a party it
 - (a) Destroyed the U. S. Bank.
 - (b) Stopped Internal Improvement.
 - (c) Brought on the Panic of 1837.
 - (d) Wrested large land holdings from Mexico.
 - (e) Sacrificed one half of Oregon.
 - (f) Opened Japan to the trade of the world.
 - (g) Provoked war by attempting to secede.
 - (h). Elected Polk, Pierce, and Buchanan to the presidency.

V. *The Whig Party.*

1. Composed of the National Republicans and all who opposed Jackson.
2. Led by Clay, Webster and Tyler. (See later course of Tyler.)
3. Fought the admission of Texas.
4. Opposed the Fugitive Slave Law.
5. Accepted the Compromise of 1850 and then nullified the Fugitive Slave clause by the passage of Personal Liberty laws through the state legislatures controlled by it.
6. Prevented the annexation of Cuba.
7. Repudiated the decision of the Supreme Court in the Dred Scott case.
8. Elected Harrison and Taylor to the presidency, the personal popularity of the candidates being the determining factor.
9. Fused with the Free Soilers and formed the Republican Party.

FOURTH DAY.

Political Parties Continued.

VI. *The Democratic Party, from 1860 to the present time.*

1. Split over the Freeport Doctrine in '60 and nominated two candidates.
2. The regular, or Breckenbridge, faction submerged itself in the Confederacy, to be lost to the world till about '76.
3. The Douglas, or Northern, wing fused with disaffected Republicans and gave McClellan a vote of 1,800,000 in '64.
4. The reunited party fused with the Liberal Republicans in '72 and voted for Horace Greely.

5. Elected Tilden in '76 but could not seat him.
6. Elected Cleveland in '84 as a result of a split in the Republican party.
7. Re-elected Cleveland in '92 on a reform ticket.
8. Committed itself to the doctrine of "free and unlimited" coinage of silver in '96, as a result of which the party split, one wing, calling itself Gold-Standard Democrats, supporting Simon Buckner for president, the other, Bryan.
9. Championed the doctrine of Anti-Imperialism in '00 but lost heavily.

VII. *The Republican Party from 1860 to the present time.*

1. Composed of the Free Soil Party (at first a detachment of the Whigs, but later came to represent the distinctive anti-slavery elements of all parties), and the remnant of the Whig Party. Historically, it represented the Federalists, National Republicans, Whigs, Free Soilers, Know-Nothings, Abolitionists, Free Staters, and Anti-Nebraska Men.
2. It elected Lincoln, Grant, Hays, Garfield, Harrison, McKinley, Roosevelt and Taft.
3. It prosecuted the Civil War.
4. It enfranchised the negro.
5. It attempted the reconstruction of the seceded states.
6. It suffered slightly in 1872 by a division and by the exposure of its corrupt administration of public affairs.
7. It seated its presidential candidate in '76 only by the use of a returning board composed of eight Republicans and seven Democrats.
8. It suffered defeat in '84 through the defection of the Stalwarts.
9. It was again defeated in '92 as a result of a reform wave
10. But in '96 it came into power again, and now retains it.

11. At present its policies are, broadly speaking, as follows:

- (a) The maintenance of the Gold Standard.
- (b) The enlargement of the powers of the courts.
- (c) Territorial expansion.
- (d) The extension of the power of the executive department.
- (e) The revision of the tariff.
- (f) Federal regulation of the means of transportation vs. state control.
- (g) Ship subsidies as a means of fostering the merchant marine.

FIFTH DAY.

MISCELLANEOUS.

(The object of this part of the program is to provide suggestive topics and questions for round-table discussions. Ordinarily the entire week may be devoted to the part assigned for the four first days; and in many counties, it is a custom to devote the last day of the institute to discussions rather than class work. The Conductor may desire to use some or all of the following along with the outline work.)

- 1. The place of U. S. History in the curriculum.
- 2. Should it be used as a text-book in reading?
- 3. Are "primary" histories desirable?
- 4. Should the average class be taught the history of the Civil War?
- 5. If so, how much time should be given to that study—
 - (a) In a nine months' course?
 - (b) In a rural school of from four to six months?
- 6. How far may the teacher interpret history to children?

7. Is it well to have the pupils read the lesson in class? Why?
8. Should the printed questions usually found at the last of the chapter be used?
 - (a) Does their use result in better recitations?
 - (b) Do they enable the teacher who is unskilled or crowded for preparation time, to stick closer to the text?
 - (c) Do they promote interest?
 - (d) Do they spoil the teacher?
 - (e) Do they hamper the mind of the pupil, causing him to look only for the answers to the printed questions instead of digesting the lesson as a whole?
9. How should this review be conducted?
10. What are the marks of a good set of test questions for the history class?
11. What dates should be required?
12. What use can be made of biography?
13. If a pupil seems to understand what he goes over and yet gets "mixed up" on the final examination should he be passed?
14. When should foot-notes be recited on? Does their use in the body of the narrative break the continuity of the lesson story?
15. What pupil in the class should be called on to tell the anecdotes? Why?
16. What is the main thing in teaching history?
17. If your own mind is not clear as to this point, or if you lose sight of the main thing, do you wonder that you fail?
18. If you must constantly watch your book to keep on the track or to test the accuracy of the recitations or if you face your class without a definite, clean-cut, teaching plan, do you wonder at failure?

19. Can one teach history helpfully who is not conversant with current history?
20. How often should the class be reviewed?
21. What is a good form of teaching outline for a history lesson? (It would be well for the Conductor to assign a lesson suitable for a seventh grade class, and require the teachers to submit outlines suitable for a twenty-minute recitation.)

ORTHOGRAPHY.

By G. A. Sullards Superintendent of Schools, De Queen.

FIRST DAY.

Value of Good Spelling.

During the last decade or two many people, including a number of prominent educators, have been denouncing spelling as an art of little value. No doubt some have shown too much devotion to, and have spent time too lavishly upon this subject, but the masses still consider correct spelling as of the greatest importance. Business men today pay more for stenographers who are accurate spellers than to those who are not accurate. Employees, of all kinds, especially those who have clerical work to do, may better their condition by knowing how to spell accurately and unhesitatingly. It is never profitable when a clerical force must spend time, which belongs to its employer, poring over pocket dictionaries because they are unable to spell the words in ordinary business use. So often has the urgency of accurate spelling been demonstrated in recent years that there is now a very general revival of interest in the subject and whatever goes to promote it is admirable.

For General Discussion.

Every written exercise should be a lesson in spelling. Insist upon accuracy and neatness from the first day to the last.

Do not conduct the written spelling lesson for the sake of the spelling alone. It should be sparkling with truths deduced and the spelling should be only a means to an end.

A spelling lesson, especially with primary grades, should be constructive. All children delight to see things made. So make your spelling lessons in their presence and with their help and watch the eye sparkle as you unfold to them the meaning of the words and as you teach them how to study.

We seldom use oral spelling these days, but we believe that it is the surest way to get a correct mental picture of the words. The child does not write the word from the black-board or from the book; he writes from the picture he has in his mind, and if he has made the picture wrong he will write the word wrong. The reason he writes it wrong is because he sees it wrong. They know the words when they see them, for they have been taught as wholes. So it is necessary to have much training of eye and voice together from both printed and written copy, with the most watchful supervision of the teacher to lead the child to SEE correctly.

Oral spelling tests should be given occasionally, but misspelled words should never, in our judgment, be passed to next pupil unless positive it will be correctly spelled. It is better to write the word that he may get it from sight. It is folly to have a wrong form repeated—get the correct form—and get it quick.

SECOND DAY.

There are four ways in which a word is imaged in the mind of the pupil.

1. The VISUAL or seen object.
2. The AUDITORY or heard object.
3. The VOCAL or sound of word.
4. The MOTOR or written object.

(It is the desire of the writer that above be thoroughly discussed by the teachers.)

For Discussion.

Use constantly such devices as picturing, imaging, grouping, definitions and classification to aid the memory in its effort to retain the correct forms in detail, and bring in the needed repetition by daily reviews. KEEP UP THESE LINES UNTIL SPELLING BECOMES AUTOMATIC.

Do not make a fetich of spelling. It should not take the time that properly belongs to other studies. On the other hand, it should be kept actively and constantly before the classes as a valuable and necessary ACCOMPANIMENT to all the other lessons. GOOD SPELLING SHOULD BE DIGNIFIED AS AN ACCOMPLISHMENT OF HIGH MERIT.

Syllabication.

Much attention should be given to syllabication. We do not think that we would require, in the regular recitation, the pronunciation of each syllable. A few general principles may be made to grow out of the work in hand to serve as a guide in this very essential feature of spelling. The frequency of the division of words at the end of a line makes it imperative, not only from the viewpoint of pronunciation but for the correct writing, that pupils understand thoroughly the dividing of the word.

If two consonants occur between two vowels, one goes with each vowel.

When only one consonant occurs between two vowels, the consonant usually goes with the second vowel. If this principle is understood by the pupil it will greatly aid in syllabication and pronunciation.

How to Study Spelling Lessons.

There is little doubt that more time is lost over spelling than over any other subject. Pupils are allowed too long a time to study. Teachers, too, often fail to indicate the words that need the most time and so the children give as much time

to the study of ANT as they do to GNAT; as much to NEW as KNEW or GNU; as much to MEN as to PEOPLE, etc.

Attention during the study period should be keen, impressions vivid, and effort concentrated upon that which is really difficult. As a rule, however, the children are hastily told to "study these words twenty times; then write them twenty times, each; then put each word into a sentence". Perhaps a part of the words need but one good, keen look to fix their images in the memory; others need all that has been asked and, possibly, a great deal more, in order to get the combinations of letters accurately and permanently placed.

Again, the teacher simply points to the list of words and says, "Study your spelling till time to recite", when that time is perhaps, forty minutes later. The children know that they have a long time and a short list of words; hence they dream away the long minutes, putting no mental effort into the so-called studying and getting less benefit out of forty minutes than they should gain from ten minutes of brisk work with every faculty alert and attention at its best.

THIRD DAY.

DIACRITICAL MARKS.

In schools adequately supplied with teachers and where sufficient time may be had, much attention is given to phonetic spelling, but in many rural schools the study has been neglected. We would insist upon the teachers giving their attention to this important feature of spelling. In order to assist some, we give below a list of diacritical marks:

NAMES.

Macron.

Breve.

Circumflex.

Dots above.

Dots below.
Dot above.
Dot below.
Tilde.
Lower Bar.
Suspended Bar.
Transverse Bar.
Cedilla.
Modified Macron.
Inverted Breve.

We feel confident that teachers will be well repaid by preparing a series of charts for the purpose of developing these elementary sounds and we suggest the following charts, which should be completed, showing the proper diacritical marks.

TABLE OF VOCALS.

A.

Long—as in ate.
Long Italian—as in arm.
Broad—as in all.
Short—as in at.
Flat—as in air.
Short Italian—as in ask.

E.

Long—as in eat.
Short—as in end.
Tilde—as in earn.

I.

Long—as in ice.
Short—as in it.

O.

Long—as in old.
Short—as in on.

OO.

Long—as in boot.
Short—as in foot.

U.

Long—as in use.

Short—as in up.

Circumflex—as in urge.

DIPHTHONGS.

oi—oil—oy—boy.

ou—out—ow—cow.

Obscure a as in final.

Obscure e as in silent.

TABLE OF VOCAL EQUIVALENTS.

a—as in what—o.

a—as in liar—e.

e—as in there—a.

e—as in they—a.

i—as in police—e.

i—as in firm—e.

o—as in ought—a.

o—as in some—u.

o—as in tailor—e.

o—as in to—oo.

o—as in world—oo.

u—as in mule—oo

u—as in fur—oo.

y—as in cry—i.

y—as in badly—i.

y.—as in myrtle—e.

TABLE OF SUBVOCALS.

b—as in band.

d—as in dead.

g—as in gum.

j—as in joy.

l—as in lip.

m—as in men.

n—as in none

ng—as in sung.

r—as in tar.
th—as in then.
v—as in vain.
w—as in went.
y—as in yacht.
z—as in zinc.
s—as in treasure.
si—as in version.

TABLE OF ASPIRATES.

f—as in far.
h—as in hand.
k—as in kind
p—as in pen.
s—as in sin.
t—as in tip.
th—as in through.
sh—as in shore.
ch—as in chick.
wh—as in whirl.

SUBVOCALS AND ASPIRATE EQUIVALENTS.

c—as in mice—s.
c—as in catch—k.
ch—as in porch—sh.
g—as in gin—j.
n—as in pink—ng.
n—as in onions—ny.
s—as in phase—z.
x—as in exit—gz.
x—as in box—ks.
ph—as in sylph—f.
qu—as in quick—kw.
qu—as in croquet—k.

FOURTH DAY

Primary Methods.

Law of Association.

In the primary grades, help the pupils by giving or illustrating the meaning of all the words they have to spell. Help them, too, by having many lessons consisting of words that fall into natural groups, as the names of the parts of a plant. For example: SUNFLOWER, BLOSSOM, LEAVES, STALK, SEEDS, ROOT, LARGE, YELLOW, BROAD, GREEN, TALL, ROUGH, HAIRY, BROWN, MANY, HARDY, STRONG. Again the lesson may be based upon units of liquid or dry measure: GILL, PINT, QUART, GALLON; PINT, QUART, PECK, BUSHEL,

Familiar things to eat or drink; articles of clothing for children to wear, for men and for women; articles of furniture for the kitchen, the dining room, the sleeping room and the parlor; names of vehicles; names of domestic animals; groceries to be ordered for breakfast, for dinner or for supper; fruits; meats; names of common diseases—all these subjects will furnish valuable material for many lists.

Train the Perceptive Powers of the Child.

IT IS A MATTER OF RECORD THAT THE CHILDREN WHO HAVE HAD THEIR PERCEPTIVE POWERS WELL TRAINED LEARN TO SPELL MANY THINGS FROM POSTERS AND OTHER ADVERTISEMENTS.

Every lesson in sense training particularly lessons to promote accuracy of visualization; every word learned as a whole from blackboard, chart or book; every word built with splints, pegs, lintels or alphabets; every word copied with crayon or pencil on blackboard, slate or paper; every word properly pronounced, and every word learned from the recognition of its syllables—all these, though not spoken of as

lessons in spelling, are really elementary phases of this subject. "DO NOT WEARY IN WELL DOING." There is, in our judgment, no actual need of a separate spelling book for children in the primary grades. In reality, they do better without this book and the only excuse for its being introduced into the three lower grades is to insure a certain amount of spelling work being accomplished in each grade. Parents should be saved this expense until their children reach the fourth or fifth year of school. Previous to that time, pupils have FAR MORE MATERIAL THAN THEY CAN MASTER IN THE WORDS THAT COME UP IN CONNECTION WITH READING, SENSE TRAINING, NATURE STUDY, LANGUAGE, NUMBER AND ELEMENTARY GEOGRAPHY LESSONS; and spelling in the first three years should be required only as a necessary adjunct rather than as a separate, isolated subject.

FIFTH DAY.

Miscellaneous.

Suggestions to be fully discussed by the teachers.

Word Building.

Most pupils take a great deal of interest in word building, and a list of the commonest English prefixes and suffixes can be used in exercises in the lower grades. The list can be enlarged as the class advances, taking in word analysis and Latin and Greek roots. Make out lists of words to which prefixes and suffixes can be added and explain the meaning of each, telling in what manner it affects the root or stem of the word and note the change in spelling certain words.

Synonyms.

In teaching synonyms, lists of words may be placed upon the board by the teacher and pupils called upon to give a sentence using synonymous words. This knowledge will be of

great help in composition work and avoid the repetition of the same word.

Homonyms.

Homonyms, or words of the same sound but of different meaning, always interest the pupil and interesting exercises may be made by writing or dictating sentences in which two words of the same pronunciation can be used, leaving blank spaces to be filled in by the pupil. This exercise may be varied by some pupil dictating or writing upon the board such sentences, the remainder of class giving the words which belong in the blanks.

Antonyms.

Antonyms may be made the subject of a great many interesting, as well as instructive, lessons by placing upon the board a list of words and having the pupils, either in concert or when called upon, give a word with the opposite meaning. These exercises assist in enlarging the vocabulary of the pupil as well as to permanently fix the meaning of the words.

Memory Study.

Spelling is essentially a memory study and therefore special attention should be given it throughout the intermediate grades. Pupils should not be allowed to write a word from dictation unless they know HOW IT LOOKS correctly spelled. The proper time to learn to spell correctly is when the pupil FIRST SEES IT. Cultivate the habit among the pupils of noting NEW WORDS carefully and picturing them in their minds.

Psychology of Spelling.

Spelling is more complex than a mere memory exercise upon letters in a given order. Perception, imagination, concentrated attention and general intelligence are all needed.

Many repetitions are necessary, and the law of association must be called frequently into play before the work of memory is rendered easy and sure.

Perception of forms, similar and dissimilar, nearly alike and wholly unlike, as wholes or in parts, must be established as the first step in spelling, for spelling is quite largely a matter of SEEING FORMS with absolute accuracy. Therefore every exercise that strengthens this power in a child is a sure unmistakable help towards accurate spelling.

PHYSIOLOGY.

By V. L. Webb, Principal of Schools, Yellville.

The study of Physiology should be as practical as possible. It is more necessary for the child to know how to care for his health than to know how many bones or muscles he has. However, the teacher and the pupil must have a knowledge of the functions of the organs of the body in order to apply hygienic and health principles understandingly.

FIRST DAY.

Digestion.

1. Position, structure and functions of the Alimentary canal.
2. Mastication.
 - (a) Poor mastication of the food a cause of dyspepsia.
 - (b) Fletcherism. The extreme.
3. Care of the teeth.
 - (a) Emphasize the danger of neglect to digestion, the eyes and etc.
 - (b) Regular visits to the dentist.

Food.

1. Necessity for foods.
2. Relative value of foods for fuel growth and repairs.
3. Necessity of variety.

Bread, meat, vegetables, fruit.

4. Adulteration and impurities in food and drink.

Cooking.

1. Pork slowly and thoroughly cooked.
2. Beefsteak, etc., cooked quickly to save juices.
3. Soup with cold water to extract all the nutriment from the solids.

Dangers to Be Avoided.

1. Impure water.
2. Excessive grease.
3. Putrines in ice cream, chicken and canned goods.
4. Poisons.

Antidotes.

If there is time, give instruction in regard to poisons and antidotes.

SECOND DAY.

Respiration.

1. Position, structure, and functions of the lungs and larynx and chest cavity.
2. Changes in air and blood in the lungs.
Effect of impure air.
3. Deep breathing.
 - (a) Use of the diaphragm.
 - (b) Erect position.

Consumption.

1. Prevalence.
2. Preventives.
 - (a) Physical exercise.
 - (b) Good ventilation.
 - (c) Oiled floors.
 - (d) Dustless crayon.
 - (e) Individual drinking cups.

- (f) Stop the spitting on the floors.
 - (g) Adenoids.
-

THIRD DAY.

Skin.

1. Structure and functions of the skin.
2. Shedding of the skin and the importance of cleanliness.
 - (a) Cold baths.
 - (b) Effect of excessive bathing.
3. Care of wounds.
Sterilizing with Hydrogen-Peroxide.
4. Infectious diseases.
5. Care of the hair and nails.

Muscles.

1. General structure.
 2. Need of systematic exercise.
 3. Avoidance of excessive exercise.
 4. Gymnastics.
 5. Athletics
-

FOURTH DAY.

Nervous System.

1. General structure and functions.
2. Reflex action, action, its importance and use.
3. Need of good food, pure air, and rest for healthy activity of the nervous system.
4. Alcohol and its effects on the brain and work of the brain.
5. Tobacco and cigarettes.
6. Sleep.

FIFTH DAY.

Circulation.

1. Structure and functions of the organs of circulation.
2. Cause of the pulse and its variation.
3. Violent exercise.
4. Anemia and how to remedy it.
5. How to stop bleeding.
6. Colds.

The Eye.

1. Form principal parts, and protection.
2. Care of the eye.
 - (a) Cross lights.
 - (b) Lamp light.
3. Nearsightedness the cause of poor lessons.
4. How to remove obstructions.

GEOGRAPHY.

By W. L. Wallace, Superintendent of Schools, Newport,

The field of geographical study is world-wide and in a sense includes all physical science. It is a nature study—in some respects, the simplest and most evident; in others, the most complex and comprehensive. Though studied chiefly for the sake of information, it affords peculiar advantages for training observation, memory, imagination, reason and the faculties of comparison.

Briefly stated, the most important purposes of geographical teaching must include the following:

- (a) To give the pupil certain facts to be laid up in memory.
- (b) To show the relations which different parts of the earth bear to each other and how all combine to make a system.
- (c) To point out the relation of the facts of geography to the life and activities of man.
- (d) To cultivate a taste for research and investigation.

A large amount of memory work must be done thoroughly; but a wise discretion must suggest what is important enough to justify the mental effort of memorizing.

As a bare fact, the locations of Cape Charles and Cape Henry are of small significance; but when it is re-

membered that through this gate-way to Chesapeake Bay passed the first English settlers of America; that through this same gateway is the entrance to the capital of the United States, to the great Navy Yard at Norfolk, to the Naval Academy at Annapolis, to Hampton Roads, the scene of the mighty conflict between the Monitor and the Merrimac; that between these two capes ride the great ships that carry the commerce between Harrisburg, Baltimore, Washington, Richmond, Norfolk, and Petersburg and the rest of the world, the locations of these two capes become facts of compelling importance that must be learned and remembered. In comparison, the location of North Cape approaches zero in importance as well as in temperature.

Decide by this standard of importance what should have most and what should have least attention.

Institute instructors, if hampered by insufficient time to present the whole outline here given, will decide by this same standard what they shall stress and what pass over lightly; although it is suggested that in five-day institutes all of Part I. and as much of Part II as possible be presented.

FIRST DAY.

Part I.

Formal study of a text-book in the third or fourth grade should be made a transition from the Nature Study of the lower grades.

Why cotton grows in Arkansas and oranges do not; why the playful monkey scampers from tree to tree in the tropical forest and the raccoon and the opossum are the prowlers of our own swamps and woods; why rice grows in this place and corn or wheat in that—these and scores of other phenomena resultant from

differences of soil and climate, can make the Geography Class one of the most enthusiastic and pleasant in school.

Part II.

Study of Arkansas

Draw a simple commercial map of the state, showing rivers, mountains, principal cities and towns, and areas of different products of farm, forest and mine. Discuss rainfall, snowfall, temperature, seasons and industries of the state.

SECOND DAY.

Part I.

Study of United States.

Area compared with Europe; population; number; from what nations principally descended; why largely English-speaking; Government; compare with English system—House of Representatives with House of Commons, Senate with House of Lords; President with King.

Draw map showing principal physical features and areas of most important farm, horticultural and mineral products and manufacturing sections.

Part II.

In like manner study Mexico and Canada.

Note: Keep in mind that detailed, accurate knowledge of our own country is most important, but that it has relations with other countries that must not be neglected; and that those countries having most intimate business and social relations with us require most attention.

THIRD DAY.

Part I.

Europe of all the continents and England of all the European nations bear closest relations to us. From England we get our language, lineage, and the basis of our governmental system; England is our best customer for food, farm and manufactured products.

Study of England.

Area, population and government of the British Isles proper; causes of her manufacturing and commercial supremacy: physical features; colonial possessions and their government.

Part II.

1. Comprehensive study of Continental Europe as a whole, including nations comprising it in order of importance as world powers, physical features, importance of the Mediterranean Sea to Southern Europe. Isolated position of Russia and her expansion eastward.
2. Germany and France studied as outlined for England in Part I for this day.

FOURTH DAY.

Part I.

1. Definition: The change of seasons is caused by—
 - (a) The revolution of the earth around the sun.
 - (b) The parallel position of the earth's axis to all former positions.
 - (c) The inclination of the earth's axis to the plane of its orbit.

Digest as a complete definition and illustrate to class by carrying globe, with axis pointed to the north star, around some central object selected to represent the sun.

Part II.

Latitude.

Reckoned from an absolute standard—the equator—all degrees of latitude have practically uniform value measured in miles so that difference in latitude of two places gives definite idea of distance in miles.

Value of a degree about $69\frac{1}{2}$ miles.

Longitude.

Reckoned from an arbitrary standard, the meridian of London, of Paris, of Washington, of Tokio or elsewhere. Value of a degree varies from $69\frac{1}{2}$ miles on equator to nothing at the poles.

Practical value of a knowledge of latitude and longitude in determining a ship's position at sea and in surveying land.

Give exercise in finding the latitude and longitude of places by use of globes.

Part III.

Continental forms, roughly triangular, mountain building, formation of the Mississippi valley by elevation of inland sea.

Geographical zones: Limits determined by inclination of the earth's axis.

FIFTH DAY.

Part I.

- I. Great Island Nations and Dependencies—their positions on the earth, physical features, resources and government.

Japan.

Australia.

New Zealand.

Philippines.
Hawaii.
Porto Rico.
Cuba.
Madagascar.
Haiti.

Great National Products, Past and Present—

Pyramids.
Great Wall of China.
Assuan Dam
Suez Canal.
Irrigation in the West.
“Fourteen Feet Through the Valley.”
Reclamation of Wet Lands by Drainage.
Panama Canal.

Part II.

Factors Determining Climate.

Latitude—Altitude.

Winds—Cause and function; wind belts of the earth.

Oceans—Relative sizes. Importance as a source of vapor, as a highway of travel, as a source of food products and other wealth.

Principal river systems of each continent. General facts relative to their importance.

ELEMENTARY ALGEBRA.

By W. O. Wilson, State Normal, Conway.

FIRST DAY.

I. Relation between arithmetic and algebra.

- (a) Illustrate the use of letters for numbers.

$5ab$ means $5 \times a \times b$; c^2 means $c \times c$; etc.

- (b) Explain and illustrate the substitution of a particular number for a letter.

When $a=4$, $b=2$, $r=0$, $s=5$, find the value of

$1ca$; $7b^2r$; $6b\sqrt{s^2b^a}$; $\frac{3a^2b}{sb}$; $(a-1)^5$; etc.

- (c) Simple arithmetical problems solved by means of the equation with one unknown.

1. A boy bought a bat and ball for \$1.50. If the ball cost twice as much as the bat, what was the cost of each?
2. The length of one side of a triangle is twice the length of the second; the length of the second is twice the length of the third; and the perimeter is 35 feet. What is the length of each side?
3. How great a space will a train travel over in 5 hours at the rate of 40 miles per hour?
4. How many feet will a body fall from rest in 5 seconds?

Note:—Problems like No. 2 above are splendid illustrations of the correlation of Geometry and Algebra. Those like No. 3 and 4 are splendid illustrations of the correlation of physics and algebra. The third is solved by a simple substitution in the algebraic formula, $s=vt$; the fourth is solved by means of formula $s=\frac{1}{2}gt^2$.

II. Position and negative numbers.

- (a) Simple scale of positive integers.
- (b) Introduction of negative numbers.
- (c) Addition and subtraction of positive and negative numbers; scale of positive and negative numbers; rise and fall of temperature; distances upstream and downstream; debits and credits; etc.

III. Definitions.

Give only definitions actually needed, such as expression, term, coefficient, exponent, power, factor, etc. Later as the subject is developed give such definitions as are then needed.

IV. Fundamental properties.

$$(a) \quad 5+3=3+5 \\ a+b=b+a$$

State the commutative law for addition.

$$(b) \quad 4+3+6=(4+3)+6=4+(3+6)=(4+6)+3, \text{ etc.} \\ a+b+c=(a+b)+c=a+(b+c)=(a+c)+b, \text{ etc.}$$

State of associative law for addition.

V. Parentheses.

- (a) Removal of parentheses preceded by + or —.

$$1. \quad a+(b-c)=?$$

$$2. \quad a-(b-c)=?$$

$$3. \quad b+4a-[x+4a+b-2y-(x+y)]=?$$

- (b) Grouping terms by means of parentheses.

$$1. \quad \text{In } a^2-x^2-2xy-y^2, \text{ group as a subtrahend the terms involving } x \text{ and } y.$$

$$2. \quad \text{In } a^2+2ab+b^2-4a-4b+4, \text{ group the first three terms as an addend and the fourth and}$$

fifth as a subtrahend.

3. Collect the coefficients of x and y in $ax - ay - bx - by$.

SECOND DAY.

I. Multiplication.

- (a) Give and explain law of signs.
(b) Give and explain law of coefficients.
(c) Give and explain law of exponents.
(d) $2 \times 3 = 3 \times 2$; $ab = ba$.

State the commutative law for multiplication.

- (e) $2 \times 3 \times 5 = (2 \times 3) \times 5 = 2 \times (3 \times 5) = (2 \times 5) \times 3$.
 $abc = (ab)c = a(bc) = (ac)b$.

State the associative law for multiplication.

- (f) $2(3 + 5 + 7) = 6 + 10 + 14$.
 $a(x + y + z) = ax + ay + az$.

State the distributive law for multiplication.

- (g) Give definitions of necessary terms in multiplication.

II. Special cases in multiplication.

Solve by inspection:

- (a) $(a + b)^2 = ?$ Give rule.
(b) $(a - b)^2 = ?$ Give rule.
(c) $(a + b + c)^2 = ?$ Give rule.
(d) $(a + b)(a - b) = ?$ Give rule.
(e) $(a + 3)(a - 2) = ?$ Give rule.

III. Multiply:

- (a) $\frac{1}{2}z^{2a+1} - \frac{1}{2}z^{2a} + \frac{1}{2}z^{2a-1}$ by $2z^{2a-1} + 2z^{2a-2} + 2z^{2a-3}$.
(b) $m^{x+1}n^{z-1} + m^{z-1}n^{x+1} + 1$ by $m^{z-1}n^{x+1} - m^{x+1}n^{z-1} + 1$.

IV. Division.

- (a) Give and explain law of signs.
(b) Give and explain law of coefficients.
(c) Give and explain law of exponents.
(d) $(ax + bx + cx) \div x = a + b + c$.

State the distributive law for division.

(e) Give definitions of necessary terms in division.

V. Special cases in division:

$$(a) \quad \begin{array}{cccc} a^2 - b^2 & a^3 - b^3 & a^4 - b^4 & a^5 - b^5 \\ \hline a - b & a - b & a - b & a - b \end{array} = ?$$

Observe that the difference of the same powers of two numbers is always divisible by the difference of the numbers.

$$(b) \quad \begin{array}{cccc} a^2 - b^2 & a^4 - b^4 & a^6 - b^6 & a^8 - b^8 \\ \hline a + b & a + b & a + b & a + b \end{array} = ?$$

Observe that the difference of the even powers of two numbers of the same degree is always divisible by the sum of the numbers.

$$(c) \quad \begin{array}{cccc} a^3 + b^3 & a^5 + b^5 & a^7 + b^7 & a^9 + b^9 \\ \hline a + b & a + b & a + b & a + b \end{array} = ?$$

Observe that the sum of the odd powers of two numbers of the same degree is always divisible by the sum of numbers.

(d) Principles to be noted with respect to the quotients in the three cases above:

1. Law of coefficients: The coefficient of each term is one.
2. Law of signs: When the second term of the divisor is plus, the signs in the quotient are alternately plus and minus; when the second term of the divisor is minus, the signs in the quotient are plus.
3. Law of exponents: The exponent of the leading letter is one less than the exponent in the dividend and decreases by one in each succeeding term; the exponent of the second letter in

the first term of the quotient is zero and increases by one in each succeeding term.

VI. Some special forms of division of binomials.

$$(a) \frac{a^9 - b^9}{a^3 - b^3} = \frac{(a^3)^3 - (b^3)^3}{a^3 - b^3} \\ = (a^3)^2 - (a^3)(b^3) + (b^3)^2 = a^6 - a^3b^3 + b^6.$$

$$(b) \frac{a^6 + b^6}{a^2 + b^2} = \frac{(a^2)^3 + (b^2)^3}{a^2 + b^2} = ?$$

$$(c) \frac{32 + x^5}{2 + x} = \frac{2^5 + x^5}{2 + x} = ?$$

VII. Divide:

$$(a) x^5 - 2x^4 + \frac{1}{12}x^3 + \frac{2}{5}x^2 + \frac{1}{15}x + \frac{5}{4} \text{ by } x - \frac{3}{2}$$

$$(b) a^3 - b^3 + c^3 + 3abc \text{ by } a^2 + b^2 + c^2 + ab - ac + bc.$$

$$(c) x^n + y^n \text{ by } x + y \text{ to five terms of the quotient.}$$

$$(d) x^{3n-3} + y^{3n+3} \text{ by } x^{n-1} + y^{n+1}.$$

THIRD DAY.

I. Transposition in equations.

$$(a) \quad x - 6 = 4$$

$$\text{Adding} \quad 6 = 6$$

$$\text{Sums, } x = 4 + 6$$

Principle: If equals are added to equals the sums are equal.

$$(b) \quad x + 6 = 20$$

$$\text{Subtracting} \quad 6 = 6$$

$$\text{Remainders, } x = 20 - 6$$

Principle: If equals are subtracted from equals, the remainders are equal.

(c) Deduce the rule for transposition.

II. Apply the following principles to simple equations:

(a) If equals are multiplied by equals, the products are equal.

(b) If equals are divided by equals, the quotients are equal.

III. Factoring.

(a) To factor a polynomial whose terms have a common factor:

$$1. \quad 5x^2 - 5x^3 = 5x^2(1 - x)$$

$$2. \quad ac - bc - cy - abc = c(a - b - y - ab).$$

(b) To factor a polynomial whose terms may be grouped to show a common polynomial factor:

$$1. \quad ax + ay + bx + by = a(x + y) + b(x + y) = (a + b)(x + y).$$

$$2. \quad cx + y - dy + cy - dx + x =$$

$$cx - dx + x + cy - dy + y =$$

$$(c - d + 1)x + (c - d + 1)y = (c - d + 1)(x + y).$$

(c) To factor a trinomial that is a perfect square.

$$1. \quad x^2 + 2xy + y^2 = (x + y)(x + y).$$

$$2. \quad x^2 - 2xy + y^2 = (x - y)(x - y).$$

When either or both of the squares are polynomials, the expression may be factored in a similar manner.

$$3. \quad x^2 + 6x(x - y) + 9(x - y)^2 = [x + 3(x - y)][x + 3(x - y)] \\ = (x + 3x - 3y)(x + 3x - y) = (4x - 3y)(4x - 3y).$$

$$4. \quad (x + y)^2 - 2(x + y)(x - y) + (x - y)^2 = \\ [(x + y) - (x - y)][(x + y) - (x - y)] =$$

$$(x + y - x + y)(x + y - x + y) = 4y^2.$$

To factor a polynomial that is a perfect square, and of the form (c), special cases in multiplication, II, Second day's lessons.

$$1. \quad a^2 + b^2 + c^2 + 2ab + 2ac + 2bc = (a + b + c)(a + b + c).$$

(e) To factor the difference of two squares:

1. $x^2 - y^2 = (x+y)(x-y)$.
2. $x^4 - y^4 = (x^2 + y^2)(x^2 - y^2) = (x^2 + y^2)(x+y)(x-y)$.

When either or both of the squares are polynomials, the expression may be factored in a similar manner:

1. $a^2 - (a+b)^2 = [a + (a+b)][a - (a+b)] =$
 $(a+a+b)(a-a-b) = (2a+b)(-b) = -b(2a+b)$.

(f) To factor a quadratic trinomial of the form (e)—

Special cases in multiplication, II, Second Day's lesson:

1. $x^2 + 7x + 12 = (x+4)(x+3)$.
2. $x^2 + 12x - 85 = (x+17)(x-5)$.
3. $9x^2 + 30x + 16 = (3x)^2 + 10(3x) + 16 =$
 $(3x+8)(3x+2)$.
4. $4x^2 - 5x - 6 = (4x^2 - 5x - 6) \times \frac{4}{4} = \frac{16x^2 - 20x - 24}{4} =$
 $\frac{(4x)^2 - 5(4x) - 24}{4} = \frac{(4x-8)(4x+3)}{4} = (x-2)(4x+3)$.

(g) To factor the difference of the same powers of two numbers:

1. $a^3 - b^3 = (a-b)(a^2 + ab + b^2)$.
2. $a^4 - b^4 = (a-b)(a^3 + a^2b + ab^2 + b^3)$.

(h) To factor the difference of the same even powers of two numbers:

1. $a^4 - b^4 = (a+b)(a^3 - a^2b + ab^2 - b^3)$.

(i) To factor the sum of the same odd powers of two numbers:

1. $a^5 + b^5 = (a+b)(a^4 - a^3b + a^2b^2 - ab^3 + b^4)$.

(j) To factor an expression by making it equal zero.

- IV. Typical expressions to be factored by special applications and devices.

(a) $x^4 + x^2y^2 + y^4$

(b) b^4+64

V. Equations solved by factoring:

(a) $x^2+6x=-9$

(b) $x^2-6x+9=0$

(c) $x^2-50=50$

(d) $x^2-6x=40$

(e) $x^3-8=0$

(f) $x^4-16=0$

(g) $x^3+27=0$

(h) $x^4+x^3-21x^2-x+20=0$

FOURTH DAY.

I. Highest Common Divisor. H. C. D.

(a) Define common factor.

(b) Define highest common factor.

(c) To find the highest common divisor of expressions that may be factored readily by inspection:

1. $10x^3y^2$, $10x^2y^3$, and $15xy^4z$.

2. a^2-x^2 and $a^2-2ax+x^2$

3. $a^2+7a+12$ and $a^2+8a+16$.

(d) To find the highest common divisor of expressions that cannot be factored readily by inspection:

1. x^2+5x+6 and $4x^3+21x^2+30x+8$

2. x^3-5x+4 , x^4-2x^3+1 , x^6+4x^3-3x-2

II. Lowest common multiple. L. C. M.

(a) Define common multiple.

(b) Define lowest common multiple.

(c) To find the lowest common multiple of expressions that may be factored readily by inspection:

1. a^3x^2y , a^2xy^3 , and ax^2y

2. x^2-y^2 , $x^2+2xy+y^2$, and $x^2-2xy+y^2$

3. $x^3+6x^2+5x-12$ and $x^3-8x^2+19x-12$

(d) To find the lowest common multiple of expressions that cannot be factored readily by inspection:

1. $4a^3+7a^2+10a-3$ and $4a^3+9a^2+14a+3$
2. $10x^4+7x^3+2x^2-x-2$ and $6x^3+5x^2+4x+1$

Rule: The lowest common multiple of two expressions may be found by dividing their product by their highest common divisor.

Note: This case should not be given until the latter part of the course.

III. Fractions.

(a) Definitions of all necessary terms.

(b) Reduction.

1. To higher terms.
2. To lower and lowest terms.
3. Principle involved.

(c) Signs in fractions. Explain the following principles:

1. The signs of both the numerator and the denominator of a fraction may be changed without changing the sign of the fraction.
2. The sign of either the numerator or the denominator of a fraction may be changed, provided the sign of the fraction is changed.
3. The signs of an even number of factors of the numerator or of the denominator may be changed without changing the sign of the fraction.
4. The signs of an odd number of factors of the numerator or of the denominator may be changed, provided the sign of the fraction is changed.

(d) To reduce a fraction to an integral or a mixed expression.

(e) To reduce an integral or a mixed expression to a fraction.

(f) To reduce dissimilar fractions to similar fractions.

(g) Explain the rules in each of the four fundamental processes.

(h) Reduce the following complex fractions to simple fractions:

$$1. \frac{\frac{x+y}{ab}}{\frac{2x-y^2}{ab^2}} \quad 2. \frac{\frac{x+y}{7}}{\frac{1}{y} - \frac{x}{x}} \quad ; \quad 3. \frac{1}{1 + \frac{1}{1 + \frac{1}{x}}}$$

(i) Define reciprocal of a fraction.

Write the reciprocal of: $\frac{1}{4}$; $\frac{a}{5}$; $\frac{x}{ab}$; $\frac{1}{x}$; $\frac{1}{y}$

(j) Fractional equations. Solve the following equations for the unknown quantities:

$$1. \frac{x}{2} + \frac{x}{6} = \frac{10}{3}$$

$$2. \frac{3x-2}{2x-5} + \frac{3x-21}{5} = \frac{6x-22}{10}$$

$$3. \frac{x+1}{x+2} + \frac{x+6}{x+7} = \frac{x+2}{x+3} + \frac{x+5}{x+6}$$

$$4. \frac{a+x}{a} - \frac{2x}{a+x} + \frac{x^2(x-a)}{a(a^2-x^2)} = \frac{1}{3}$$

FIFTH DAY.

I. Equations.

(a) What is an equation?

- (b) What is a simple equation?
 (c) What are simultaneous simple equations?
 (d) What is elimination?
 (e) Illustrate the three processes of elimination.

1. Addition and subtraction.

2. Comparison.

3. Substitution.

(f) Solve the following :

1. $7x - 5y = 52$

$$2x + 5y = 47$$

2. $\frac{x}{4} + \frac{y}{2} = 12$

$$\frac{x}{4} - \frac{y}{2} = -2$$

3. $\frac{x+y}{2} - \frac{x-y}{3} = 8$

$$\frac{x+y}{3} + \frac{x-y}{4} = 11$$

4. $a(a-x) = 5$
 $bx - cy = n$

5. $\frac{x}{a} + \frac{y}{b} = c.$

$$\frac{x}{b} + \frac{y}{a} = d$$

6. A crew can row 8 miles downstream and back in $1\frac{1}{2}$ hours, or 12 miles downstream and half way back in the same time. What is the rate of rowing in still water and the velocity of the stream?

7. The sum of two digits of a number is 12. If the order of the digits is reversed, the number will lack 12 of being doubled. What is the number?

$$\begin{aligned} 8. \quad x+y &= 9 \\ y+z &= 7 \\ z+x &= 5 \end{aligned}$$

$$9. \quad \frac{1}{x} + \frac{1}{y} = 6$$

$$\frac{1}{y} + \frac{1}{z} = 10$$

$$\frac{1}{z} + \frac{1}{x} = 8$$

$$\begin{array}{r} 10. \quad \frac{xy}{x+y} = \frac{1}{5} \\ \frac{yz}{y+z} = \frac{1}{6} \\ \frac{zx}{z+x} = \frac{1}{7} \end{array}$$

$$\begin{aligned} 11. \quad axy - x - y &= 0 \\ bzx - z - x &= 0 \\ cyz - y - z &= 0 \end{aligned}$$

CIVIL GOVERNMENT.

FIRST DAY.

By J. W. Sallis, Principal of Schools, Clarksville.

Man a gregarious (grex, gregis) animal, hence the need of government even in a savage state.

The family the unit of government.

Forms of government.

1. Patriarchal (pater, father: archos, chief or head).
2. Theocracy (Gr. Theos, God: Kratos, power).
3. Monarchy (Gr. monos, sole or only: archos, chief or head).
4. Aristocracy (Gr. aristos, best: kratos, power).
5. Democracy (Gr. demos, the people: kratos, power).
6. Republic (Lat. res, a thing : publica, public).

Give examples of each form of government.

What form of government has the United States of America?

Distinguish between the governments of Switzerland, France and the United States.

What is the best form of government?

LAW DEFINED.

Law classified:

- (a) Civil.
- (b) Commercial.
- (c) Common.
- (d) Constitutional.

- (e) Criminal.
- (f) International.
- (g) Martial.
- (h) Moral.
- (i) Parliamentary.
- (j) Statutory.

RIGHTS DEFINED.

1. Civil.

Absolute :

- (a) Personal security.
- (b) Personal liberty.
- (c) Personal property.

Relative, such as :

- (a) Protection from the government.
- (b) Of parents to require obedience of their children.

2. Political.

All political rights are relative. The state can say who can vote; who can hold office, etc.

3. Religious.

This is really an absolute civil right and falls under the head of personal liberty.

Every right pre-supposes a duty.

Duty defined.

Liberty defined.

SECOND DAY.

All governmental machinery, a public corporation.

Corporation defined.

The United States is a great corporation or body politic. Forty-six states composing the corporation, each having a government modeled after the Federal Constitution. Each

state composed of counties containing municipalities and townships all having governments, in many ways analogous to that of the nation.

The system consist of:

United States.

1. Executive, President.
2. Legislative.
 - (a) Senate.
 - (b). House of Representatives.
3. Judicial, Supreme Court.

State.

1. Executive, Governor.
2. Legislative.
 - (a) Senate.
 - (b) House of Representatives.
3. Judicial, Supreme Court.

Counties.

1. Executive, Sheriff.
2. Legislative, consists of one body. Of whom composed?
3. Judicial. In whom vested?

Cities and towns.

1. Executive, Mayor.
2. Legislative, City Council.
3. Judicial, Police Judge.

Township.

1. Executive, in whom vested?
2. Legislative.
3. Judicial, Justice of the Peace.

Township defined.

Township officers.

THIRD DAY.

1. Municipalities defined.
2. City governments vary widely in different states and even in the same state.
3. A limited district in a county.
4. Chartered by the state, i. e., given distinct corporate powers.
5. Classified.
 - (a) Cities of the first and second class.
 - (b) Towns and villages.

Cities of the first class.

- (a) How incorporated?
- (b) Mayor, duties.
- (c) Clerk.
- (d) Treasurer.
- (e) Police Judge, duties, etc.
- (f) Council. Of whom composed? Duties.
- (g) Appointive officers.

Towns.

- (a) How incorporated?
- (b) Mayor.
- (c) Clerk.
- (d) Treasurer.
- (e) Marshal.
- (f) Recorder.

The county.

1. Size varies in different states and in the same state.
2. Number in Arkansas.
3. Why organized.
4. Executive, sheriff.
5. Legislative, in whom vested?
6. Judicial, County Judge; also judge of the probate court.

Explain duties of each. The sheriff is purely an executive. Has no veto power, no judiciary authority.

7. Administrative Officers of the County.

- (a) Clerk.
- (b) Treasurer.
- (c) Attorney.
- (d) County Superintendent of Schools.
- (e) Surveyor.
- (f) Coroner.

How elected, term of office, duties and salary of each.

FOURTH DAY.

THE STATE OF ARKANSAS.

- 1. How and when formed?
- 2. How many constitutional conventions has the state had? Give the date and discuss each.

Give date of the constitutional convention that adopted the present constitution. When and how was it ratified?

Executive Department.

- (a) Governor, qualifications, duties, salary.

Duties:

- (a) Executive—May convoke legislature or senate, on extraordinary occasions.
- (b) Commission officers not otherwise commissioned by law; commander-in-chief of the militia of the state.
- (c) Cause laws to be faithfully executed.

Legislative.

- (a) Veto bills and joint resolutions.
- (b) By means of messages he instructs the legislature regarding needed legislation.

Judicial.

- (a) Has power to grant reprieves, commutations, paroles, pardons after conviction.

Legislative Department.

Legislature composed of:

- (a) Senate—Number, age qualification and duties. Presiding officer.

Committees, term and salary.

- (b) House of Representatives.

Number, age qualification, term, salary, duties of each. Presiding officer, and committees.

Revenue bills.

- (c) Session of Legislature.

Quorum.

Vacancies, control over members, rules of proceeding, adjournment, etc.

Bills, passage and style of, veto. How passed after veto.

FIFTH DAY.

(Arkansas—continued.)

Judicial Department.

1. Senate sitting as Court of Impeachment.
2. Supreme Court, of whom composed, qualifications, duties, salary.
3. Circuit courts, jurisdiction, term of office, salary.
4. County Court.
5. Jurisdiction of Supreme Court.
6. Law distinguished from equity.
7. The jury system.

Grand jury, what is it for?

Petit jury, its duties.

Number necessary to convict.

Juries in County and Justice Courts.

Verdict.

The Constitution of the United States.

1. How formed?
2. Bill of rights.
3. What is a bill of rights?
4. Their origin. Why? When? How?
(Prepare a minute outline of the subject matter of the first nine amendments.)
5. What historical incident gave rise to amendments from X to XV?
6. When proposed? Adopted?

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